

NASA STI PROGRAM _____

COORDINATING COUNCIL

Second Meeting _____ JULY 23, 1990

INTERNATIONAL ACQUISITIONS



NASA STI PROGRAM

**Coordinating Council
Second Meeting
July 23, 1990**

AGENDA

NASA STI PROGRAM COORDINATING COUNCIL
Second Meeting
July 23, 1990

9:30 — 9:50	Opening Remarks Coordinating Council Organization International Plan	Gladys Cotter, NASA
9:50 — 10:00	STI Global Network	Judy Hunter, NASA
10:00 — 10:05	International Aerospace Climate	Cort Durocher, AIAA
10:05 — 11:00	Foreign Exchange Program ESA Bilateral and Trilateral Agreements	Phil Thibideau, NASA
11:00 — 11:15	Break	
11:15 — 11:30	Foreign activities — RMS	Joe Gignac, RMS
11:30 — 11:45	Foreign activities — RMS (cont'd)	Jean Tolzman, RMS
11:45 — 12:30	Lunch	
12:30 — 2:10	Foreign Activities — AIAA	Barbara Lawrence, AIAA
2:10 — 2:30	NASA Translation Program	Katie Bajis, RMS
2:30 — 2:45	A.F. Machine Translation System	John Wilson, NASA
2:45 — 3:00	CIRC Cooperation	John Wilson, NASA
3:00 — 4:00	Brainstorming	All

The meeting will be held in Conference Room A, 10th Floor, Aerospace Building (across the street from L'Enfant Plaza, behind GSA, facing "D" Street).

NASA STI PROGRAM

**Coordinating Council
Second Meeting
July 23, 1990**

SUMMARY OF PRESENTATIONS

NASA STI PROGRAM COORDINATING COUNCIL
Second Meeting
July 23, 1990

ATTENDEES:

NASA - R. Rice, G. Cotter, J. Wilson, K. Voglewede,
P. Thibideau, A. Del Frate, P. Sullivan,
J. Hunter

RMS - C. Eberline, J. Gignac, J. Tolzman
K. Bajis

AIAA - B. Lawrence, P. Marshall, C. Durocher

SUMMARY OF PRESENTATIONS

Opening Remarks - Coordinating Council Organization - International Plan - Ms. Gladys Cotter, NASA

In her opening remarks, Ms. Cotter introduced the members of the coordinating council. The membership is made up of NASA Headquarters, Centers, and Contractor personnel.

Ms. Cotter discussed the structure and procedures to be followed during these sessions, and presented a preliminary listing of issues to be acted upon. These issues included - DIALOG vs RECON, DAA, NACA, Quality, STI NMI, STI Consulting Group, and Acquisition Rate. Ms. Cotter mentioned that the NASA Management Instruction (NMI) 2220.5C, dated March 1989 is a document which must be updated to reflect the current and projected STI direction and this group will play a part in updating it. The question of whether or not consultant groups should be a part of the Council will be discussed as an issue. The acquisition rate of documents compared to what NASA should be getting will be a subject for discussion. How does the NASA rate compared against the other CENDI organizations, i.e., DOE and DTIC, who report 98 and 50 percent respectively.

Ms. Cotter mentioned that the "Issues List" is just a partial list of topics that have come up which need to be addressed until the issues are resolved. Reporting on action taken to resolve these issues is an important aspect of the Council's responsibility. Ms. Cotter indicated that the first meeting was devoted to DIALOG vs RECON. The results of that session disclosed that further study was required to cover all aspects and impacts of this proposal. Thus, NTT, on advice from Mr. Roland Ridgeway, Code DT, is looking toward having an independent consultant, MITRE Corp. conduct an indepth study to determine the most cost effective approach to dealing with this issue.

Ms. Cotter stated that today's meeting is focused upon the international aspects of the program. Ms. Bonnie Carroll was introduced as the key person who is under contract with NTT to document the current program as well as document the action plan for future global expansion. Ms. Cotter emphasized the importance of this task. The results of this task will be used as one means to gain support for increasing the scope of the STI program and to forestall any anticipated cutbacks in this area. Ms. Carroll will be talking with each member of the council to find out what is taking place in the current programs, and prepare a document which describes the process inside and out, both at the NASA STI Facility and at AIAA, and the plan for identifying needs and opportunities for expansion taking into consideration political opportunities within Eastern Europe, and mission direction, such as Global Change and Mission to Planet Earth.

STI Global Network - Ms. Judy Hunter, NASA

Using several viewgraphs, Ms. Hunter presented an overview of the a Global STI Network from a user perspective. Ms. Hunter described the current user environment and all the tedious protocols necessary to access databases via modems, direct connections, or local area networks. Ms. Hunter explained the current process of exchanging information between host databases via documents, microfiche, and magnetic tape, using shuttle or mail services. The receiving organization reprocesses the data to meet their needs.

Ms. Hunter proposes as future goals for the STI program several significant events: 1) provide access to worldwide STI; 2) reduce the duplication of data between STI databases; 3) promote cooperative agreements between agencies; 4) make the connections transparent to the user, and 5) provide a "one-stop shopping" environment for the user.

To accomplish these goals, Ms. Hunter proposes to use Intelligent Gateway Technology. In this scenario, a user would have direct access to a directory of resources which would provide the user with information relevant to the particular research project; the Intelligent Gateway Processor would help the user make connection to networks which are already in place; the retrieved data would be post-processed using personal computers. Ms. Hunter further elaborated on the need to transfer publication data electronically from the Centers using full-text retrieval technology and mass storage, such as CD-ROM.

International Aerospace Climate - Mr. Cort Durocher, AIAA

Mr. Durocher indicated that AIAA is an international organization with over 45,000 professional members representing 50 different countries. Mr. Durocher explained that Ms. Lawrence will discuss the international aspects of AIAA with respect to collection, processing, and dissemination of the open literature, but that he would concentrate on describing other departments within AIAA that have international ties.

Mr. Durocher mentioned the standards department involved in working space standards, crew rescue, and other spacecraft ideas through the International Standards Organization.

About 15 textbooks are created each year by their publishing department. Publishing agreements are in place to work with Moscow aviation. Several meetings are planned with the Soviet Union. Several meetings have taken place over the past several years with England and Israel. Mr. Durocher indicated that many articles are published in their magazine by international authors concerning such themes as propulsion and international cooperation. Their exhibit participation is now at an international level, with participation in such air shows as the Paris Air Show. The Aerospace Engineering Conference is now internationalized promoting global cooperation. AIAA has fostered special awards for aeronautics, astronautics, and international cooperation. Mr. Durocher mentioned several past and future planned conferences that the AIAA membership is actively involved in: 1) International Astronautical Federation (IAF); 2) International Institute for Space; and 3) International Society for Air Breathing Engines.

Mr. Durocher emphasized an important event which will bring space scientists and space engineers together for a joint congress in recognition of the 1992 International Space Year. The design and contents of the self-mailer announcing this major event were described.

Mr. Durocher concluded his presentation by stating the climate for international cooperation is very positive. The Italians, Malaysians, and Netherlands are all positive about international technology. In response to a question from a member of the council, Mr. Durocher responded that the Space Information Systems Conference is held regularly and he invites members of NTT to present papers at the conference.

Foreign Exchange Program - ESA - Bilateral and Trilateral Agreements - Mr. Phillip Thibideau, NASA

Mr. Thibideau, in a series of viewgraphs, presented an overview of the international STI activities. In perspective, about 45 percent of the 1989 STAR/IAA Input was from foreign sources; foreign exchanges yielded about 5,000 reports or 28% of STAR input; and AIAA reviews about 800 periodicals which accounts for about 53 percent of the IAA input. The significance of this activity makes the "Aerospace Database" international and comprehensive; and provides hard to get material not otherwise available. The fact that NASA exchanges only publicly-available material allows this material to be shared worldwide. Foreign organizations constitute main sources of basic research results for the U.S. Aerospace R&D community.

In discussing the over 25-year exchange with the European Space Agency (ESA) involving reports, translations, and bibliographic data, Mr. Thibideau indicated that this cooperative and successful exchange has resulted in: 1) 518 participating organizations in 17 countries; 2) ESA's contract volume with their contractor specifies processing 4000 technical reports annually to the NASA standard, including the submission of documents, microfiche, and electronic tape input; and 3) processing of about 80 ESA Technical Translations per year in German and French.

Mr. Thibideau presented a viewgraph on the number and distribution of tripartite organizations within ESA and their contribution of documents to the STI Database. Mr. Thibideau noted that of the 17 countries listed, three countries: Iceland, Morocco, and Portugal, maintain a tripartite relationship at the request of ESA because of special consideration of Sweden, France, and Spain respectively. Mr. Thibideau further noted that the most active members in terms of contributions are France, Germany, the Netherlands, and the United Kingdom.

In discussing the national-level exchange agreements, Mr. Thibideau provided an overview of the positive actions taken to conclude three (3) agreements. The Australian agreement in January 1988, Canadian agreement in May 1989, and the Israeli agreement in October 1986. One agreement is being negotiated with Japan, with a draft agreement sent in July 1990. With regard to the Australians, internal regulations require monetary offsets in return for their contributions. However, the offsets issue was completed as an impasse, and the Australian agreement is now moving forward to a successful conclusion. Mr. Thibideau indicated that the Canadian agreement moved out very quickly and they have 110 participating organizations. Micromedia, a contractor organization to CISTI, will be responsible for the pre-processing of Canada's input to the STI Database in the NASA format. In the case of Israel, because of their size they have fewer operating units in the aerospace area, but in terms of theoretical work they have very high quality standards. Mr. Thibideau indicated that the Japanese agreement with the National Space Development Agency (NASDA) has been under negotiation since 1985 but this Agency is unable to accept all of Japan's input. A second agreement may be necessary with the Institute of Space and Science. The main purpose of national-level agreements, according to Mr. Thibideau, is to obtain the world's technical reports at minimal cost to NASA.

Mr. Thibideau explained that the third category of exchange arrangements is the oldest - bilateral exchange through which documents are exchanged for access to STAR. Presently there are about 43 countries with 220 participating organizational agreements involved in this type of arrangement. Mr. Thibideau indicated that it was very difficult at this stage to tell who's contributing under this type of agreement or who is being picked up under the surveillance of another organization. Thus, NASA is not encouraging continuation of this type of agreement and will look at ways to reduce this activity in coordination with Program Offices.

Foreign Activities - NASA STI Facility - Joe Gignac, RMS Associates

Mr. Gignac in a series of viewgraphs described the present foreign acquisitions activities conducted at the NASA STI Facility. The presentation covered the automatic distribution agreements with foreign partners and the search for foreign materials through reference sources, journals, and bibliographies such as GRA&I, AGARD and ESA reports. As previously discussed by Mr. Thibideau, the source of foreign input was highlighted to include the number of tripartite, national-level, and bilateral organizations contributing to the NASA STI database. Mr. Gignac described the preprocessing of S&T Reports by the national-level

organizations who prepare 901-forms, magnetic tape, microfiche and printouts, and the Facility staff's responsibility for the review, evaluation, and feedback to the originator of the material. Mr. Gignac discussed the Distribution Control and Analysis File (DCAF) and how it is used to include the authority for services, profiles of users, a source of statistics and how it is used by NASA in evaluation foreign exchange participation.

Foreign Activities - NASA STI Facility - Jean Tolzman, RMS Associates

Ms. Tolzman presented in a series of viewgraphs: several potentials for enhancing the Facility foreign acquisitions efforts; methodologies for increasing volume and timeliness; and the potential impacts of expanding the volumes of foreign acquisitions. With respect to enhancements, Ms. Tolzman suggested 11 possibilities for consideration including the following: 1) building working relationships with new/existing trading partners; 2) expanding identification/location resources and procedures; 3) expanding acquisitions for alternate media formats; 4) rewarding trading partners for timely input; 5) engaging users as trading partners; 6) modifying database record input format; 7) streamlining acquisitions process; 8) providing multiple acquisitions routes; 9) exploiting "gray market" sources; 10) measuring supplier performance level; and 11) expanding scope and coverage.

To increase volume and timeliness, Ms. Tolzman suggested that users be encouraged to identify literature through online mechanisms. Although reasonably productive for many years, it may be time to review the entire acquisition process and workflow to delete outdated requirements and streamline process and workflows. The modification of database record input may be helpful by increased use of electronic file transfer, the use of hand-held scanners, and updating the record-transfer format. Ms. Tolzman further suggested obtaining identified literature directly from a source if it is more timely or the only available source, and actively identifying more literature through increasing the review of reference resources. Ms. Tolzman presented a viewgraph which described the elapsed time in months from publication date to actual accessioning into the NASA STI Database for ESA and DCAF reports. This time ranged from 12 months to over 132 months.

Ms. Tolzman explained the potential impacts of expanding the volume of foreign acquisitions processing at the Facility. This included a need for new equipment, a potential increase in labor resources, registration of copyright restrictions, and expanded translation requirements.

Foreign Activities - AIAA - Barbara Lawrence, AIAA

Ms. Lawrence's presentation consisted of two parts. Part I discusses the international outlook, and Part II presents AIAA's approach to international acquisitions. Ms. Lawrence began Part one of the presentation by displaying an article from the Harvard Business Review, 1989, entitled "The Need for an International Outlook"; Worldwide Dissemination of Scientific Knowledge. The excerpt describes five trends as follows: 1) worldwide dissemination of expanding scientific knowledge; 2) growth in the number of global

competitors; 3) fragmented markets and shifting customer preferences; 4) production technologies that allow greater flexibility and responsiveness; and 5) a proliferation in the number of technologies relevant to any given product. As evidence of these trends, Ms. Lawrence displayed a listing of recent headlines about foreign S&T activities. Ms. Lawrence indicated that European scientists are writing and documenting research results, but that the U. S. is not taking full advantage of this material. To illustrate this situation, Ms. Lawrence displayed a chart which shows the aerospace literature distribution vs. utilization. The U.S. S&T community overwhelmingly cite U.S. literature. Ms. Lawrence mentioned a NASA/DOD Knowledge Diffusion Project on external information sources and aerospace R&D. The findings of the project showed that accessibility was important, but connected to quality of the information. The finding further indicated that information external to organizations is used less than internal information.

In Part two of the presentation, Ms. Lawrence outlines AIAA's strategic plan for improved utilization of aerospace STI with special emphasis on use of international aerospace literature. AIAA's Technical Information Service (TIS) mission was described. The TIS mission is to provide quality aerospace information products and services to the international aerospace communities by collecting, processing, storing, and disseminating worldwide aerospace STI. Ms. Lawrence discussed the following key approaches for global acquisitions: 1) literature surveillance; 2) worldwide networking; 3) AIAA's position; and 4) diverse sources of material. In discussing AIAA's TIS acquisition initiatives, Ms. Lawrence mentioned a technical awareness program; the review of compositions from their publications department for exchange potential; exploration of the use of computer translations; and possible discussions with scientific attaches.

Ms. Lawrence presented a series of statistical graphics which gives examples of country publication behavior. The graphics show for the years 1985 through 1989 the number of affiliations compared to the number of publications for the following countries: 1) United States; 2) France; 3) Peoples Republic of China; and 4) Japan. By country of affiliation, for the same period, Ms. Lawrence indicated the major producers of STI are the United States, USSR, Japan, Great Britain, Germany-FRG, France, China-PRC, and Canada. By region of affiliation, the U. S. continues to dominate compared to Western Europe, Eastern Europe, the Pacific Rim and others. The major foreign language trends show some growth in Chinese and a relative decline in German over an 11-year period, with Japanese, French, and Russian relatively stable.

In conclusion, Ms. Lawrence presented a viewgraph on International Themes which depicts competitiveness and cooperation and shows regional trends within Europe, South America, Eastern Europe, the Pacific Rim and the United States.

NASA Translation Program - Katie Bajis, RMS Associates

Ms. Bajis, using several viewgraphs, presented an overview of the NASA Translation Service Support Project. The translation work flow was described from receipt of the translation

request through the following steps: duplicate checking; determination of word count and cost; shipment of document to the translations contractor; quality assurance of completed translation; and distribution of the completed translation to the originator and to the NASA STI Facility for input processing to the database. Ms. Bajis emphasized that the duplicate check processing included a search of the NASA STI Database as well as the Library of Congress's National Translation Center, and JPRS. The steps taken to ensure a quality translation were described including the evaluation form sent to the originator which provides good feedback on the adequacy of the translation. Ms. Bajis described the process of assigning NASA TT report numbers to the completed translation for entry into the limited distribution series (1X). The translated version is limited to U. S. Government Agencies and Contractors only, while the original language version is announced in the publicly available 1N series. Ms. Bajis indicated that this announcement method was set up several years ago, presumably to protect copyright.

Using a pie-chart graphic, Ms. Bajis described the volume of technical translations received and processed for FY 1989. The chart shows a breakdown by NASA activity for a total of 259 translations. In another pie-chart, Ms. Bajis displayed the number of words translated, by foreign language, which totaled 3,172,072 for FY 1989. The most prevalent translations were in Russian, German, French, Japanese, and Chinese, in that order.

Air Force Machine Translation System - CIRC Cooperation - Mr. John Wilson, NASA

Mr. Wilson discussed his recent visit to the Space Station Office and conversations with Dr. Bluth who has expressed a keen interest in obtaining USSR research and development literature for nitty-gritty information. The analogy of positive and negative grounding was mentioned as an example. Engineering and testing information is high on the list of needs for the SSPO as well. Mr. Wilson indicated that the acquisition of USSR documents needs to be expanded to meet the needs of the SSPO programs. The Russian National Information Center was identified as a resource where such documents would be identified and retrieved on a reimbursable basis.

Another source of foreign R&D report information is the Central Information Reference Center (CIRC) file which was designed and developed by the Defense Intelligence Agency (DIA). Mr. Wilson indicated that this file contains over 8 million items, and augmented at a rate of approximately 300,000 items per year. A comparative analysis of the CIRC and NASA STI Database is planned which will identify any gaps. While the extent of the yield from this comparison is not known, Mr. Wilson believes it would number in the hundred of thousands thus dictating a need for high volume machine translations. Mr. Wilson mentioned that according to Dr. Bluth, SSPO, an unbelievable amount of USSR material must be scanned in order to come up with a few facts.

Mr. Wilson described one of the largest computer systems for machine translation which is located at Wright-Patterson AFB, Ohio. This systems is managed by Dr. Bolstaadt who has been working on the system for over 30 years. According to Mr. Wilson, the system feeds

over 1200 foreign service analysts who retrieve documents and prepare abstracts. The principal languages serviced by the analysts are Russian, Spanish, French, German, and others. Although the system does not handle Chinese and Japanese languages at the present time the Air Force is working on a new system which may be available within 18 months. Mr. Wilson discussed the cyrillic transliteration process the Air Force is using to translate Russian text into English using digital scanning technology. Mr. Wilson indicated that NASA would be making an extensive effort to gather more and more Russian reports in the native language. The translations of this material would make use of the AF system as well as the traditional human methodology.

Closing Remarks - Ms. Gladys Cotter, NASA

In concluding the Council's meeting, Ms. Cotter presented the following action items and the next agenda topics:

Action Items

1. Review policy decision previously made by C. W. Hargrave on the treatment of unknown values for Country of Origin in annual statistics. He directed that the Country of Publication value be used for unknown Country of Origin value. AIAA/NTT.
2. Review decision previously made by C. W. Hargrave to place citations to NASA-funded translations in the X-Series in the STI Database. Apparently this decision was made to deal with the copyright issue. NTT.
3. Review current NASA translations contract to determine the potential for providing cost reimbursable translations services to non-NASA agencies and organizations. Try to incorporate this into the next contract or provide an alternate vehicle. NTT.
4. Collect information on current International STI Acquisitions Program and document it for a brochure. Bonnie Carroll.
5. Develop a tactical plan for expanding the STI program for international acquisitions. Bonnie Carroll.
6. Include on the agenda for the next Council meeting:
 - updated status on international acquisitions
 - overview of NTT strategic planning sessions
 - invite a speaker from the NASA International Affairs Office

**OPENING REMARKS
COORDINATING COUNCIL ORGANIZATION
INTERNATIONAL PLAN**

***Presented by
Gladys Cotter, NASA***

**NASA STI PROGRAM COORDINATING
COUNCIL**

SECOND MEETING

JULY 23, 1990

MEMBERSHIP:

HQ NASA Representatives
Contractors
Center Representatives

STRUCTURE:

Council vs. Action Teams

PROCEDURES:

Council Minutes
Action Reports
Issues List

ISSUES LIST

DIALOG vs RECON

DAA

NACA

Quality

STI NMI

**STI Consulting Group
Acquisition Rate**

DIALOG vs RECON

STATUS: Study Required

INTERNATIONAL ACTION PLAN

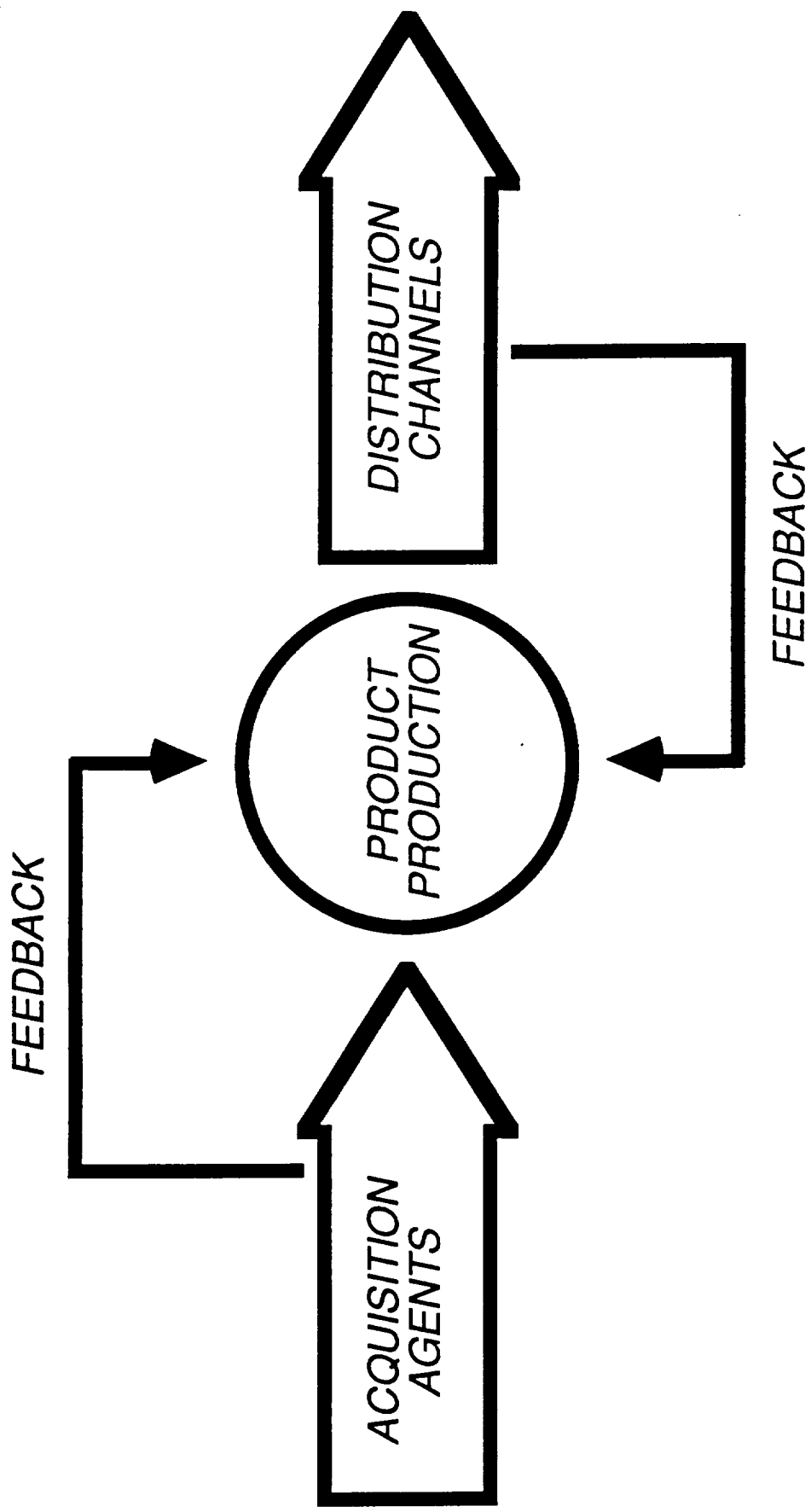
Document the Existing Program

**Action: Provide Information — Coordinating Council
Document — Bonnie Carroll**

Identify Needs/Opportunities for Expansion

- Political Opportunities**
 - Eastern Europe**
- Mission Directions**
 - Global change / Mission to Planet Earth**

**Action: Plan — Coordinating Council
Document — Bonnie Carroll**



ACQUISITION AGENTS:

AIAA

STIF

ESA

National Level Agreements

Bilateral Agreements

State Department

DISTRIBUTION CHANNELS:

STIF

AIAA

ESA

Center STI Program Offices

NTIS

ICAs

Libraries

National Centers

PROGRAM FEED BACK LOOPS:

**User Meetings
Personnel Exchange**

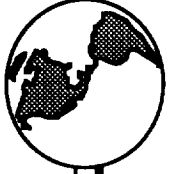
STI GLOBAL NETWORK

***Presented by
Judy Hunter, NASA***

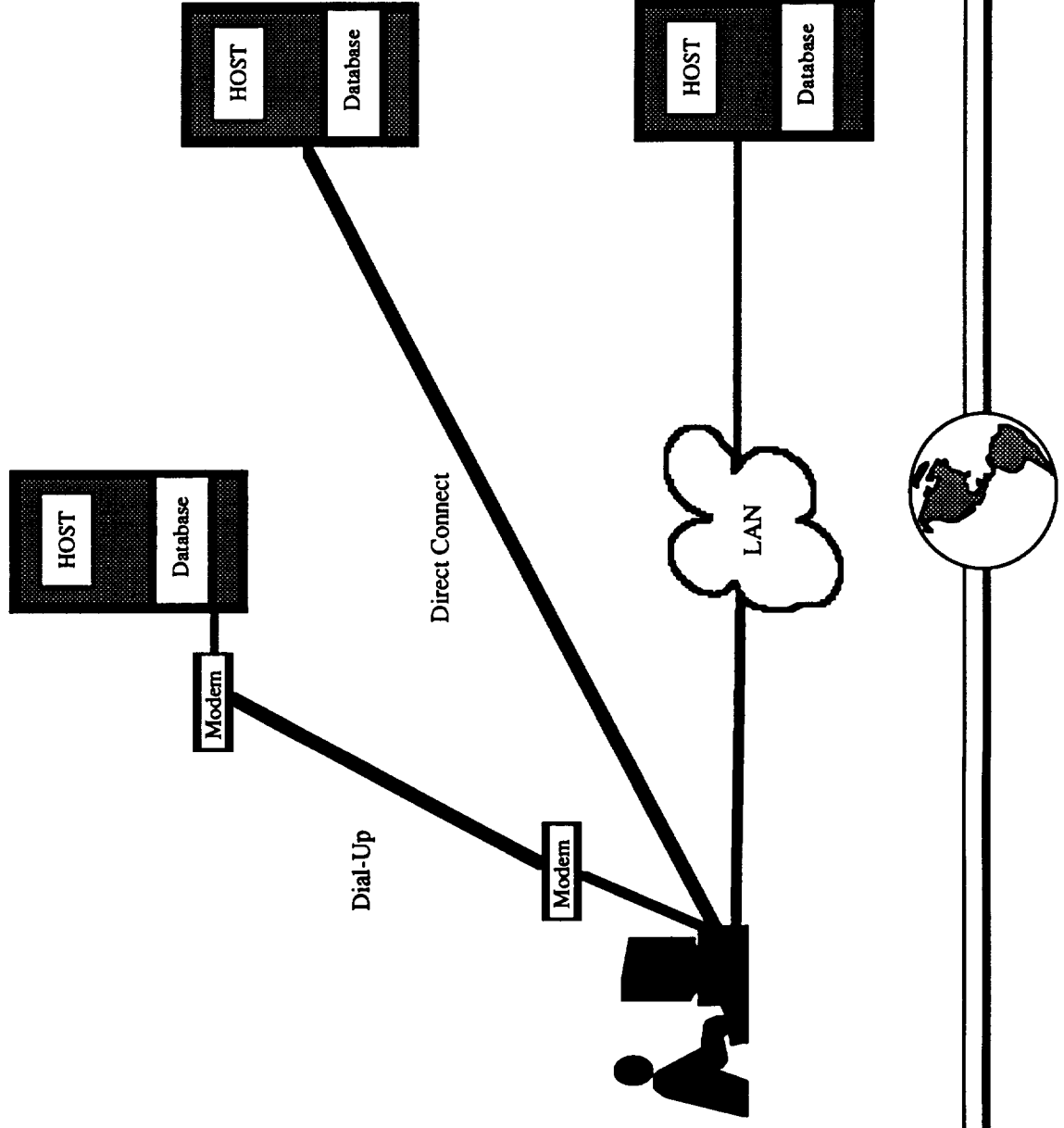
NASA Global Scientific and Technical Information Network

Presented by: Judy Hunter

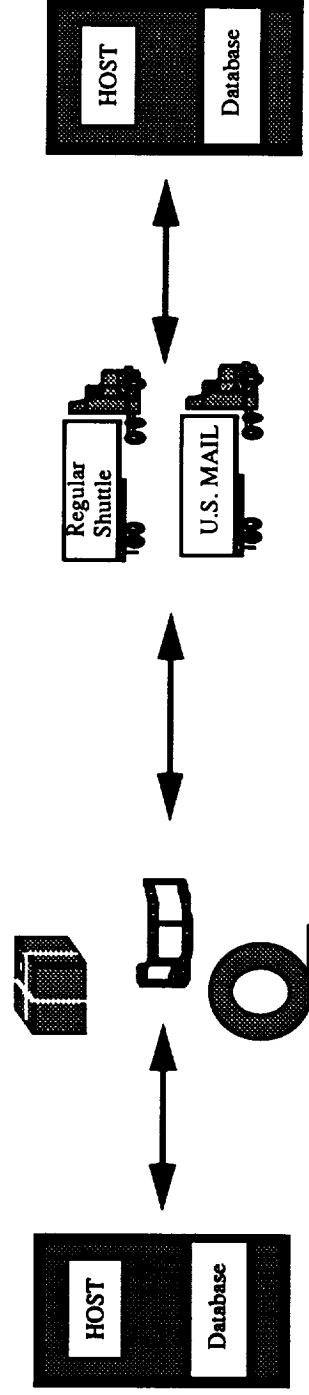
July 23, 1990



Current User Environment

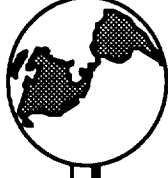


Current Exchange of STI Between Hosts

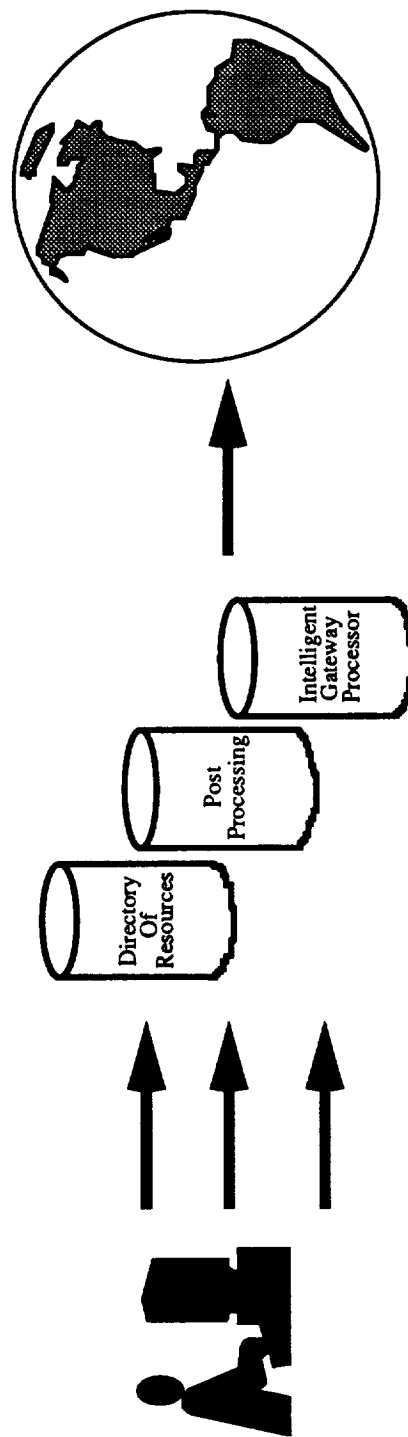


Future Goals

- Provide access to STI worldwide
- Reduce the duplication of data between STI databases
- Promote cooperative agreements between agencies
- Make the connections transparent to the user
- Provide "one-stop shopping" environment for user



INTELLIGENT GATEWAY TECHNOLOGY



**FOREIGN EXCHANGE PROGRAM
ESA
BILATERAL AND TRILATERAL AGREEMENTS**

***Presented by
Phil Thibideau, NASA***

STI Policy And Planning Branch
International STI Activities

July 23, 1990

STI Policy And Planning Branch
International STI Activities

- o Perspective
 - Foreign Accessions Are 45 Percent Of 1989 STAR/IAA Input
 - Exchanges Yielded Over 5,000 Reports In 1989 (28 Percent Of STAR)
 - AIAA Reviews About 800 Foreign Periodicals Annually (53 Percent Of IAA)
- o Significance
 - Makes "Aerospace Database" International And Comprehensive
 - Provides "Hard To Get" Material Not Otherwise Available
 - NASA Exchanges Only "Publicly Available" Materials
 - Foreign Organizations Constitute Main Sources Of "Basic Research" Results
- o ESA Exchange (Reports, Translations, And Bibliographic Data)
 - 518 Organizations In 17 Countries
 - 4,000 Reports Processed Per Year (Paper And Microfiche Plus Bibliographical Data)
 - 80 ESA Technical Translations Per Year (75 Percent From German; 25 Percent From French)

STI Policy And Planning Branch

International STI Activities

National-Level Exchange Agreements (Contd.)

- o National-Level Exchanges (Reports, Translations And Bibliographic Data)
 - Israel In 1986 - Canada In 1989
 - Australia In 1988 - Japan Under Negotiation
- o Bilateral Exchanges (Reports)
 - 220 Organizations In 43 Countries
- o Program Development
 - New Agreement Development, Coordination, Conclusion, And Implementation
- o Program Management
 - Continual Interfacing With Other NASA Offices And U.S. Agencies
 - Continual Interfacing With Foreign And International Organizations
 - Overseeing Foreign Collecting And Processing Activities

STI Policy And Planning Branch
International STI Activities

Foreign Accessions

STATISTICS

	<u>1989</u>			<u>1968-89</u>		
	<u>STAR</u>	<u>IAA</u>	<u>COMBINED</u>	<u>STAR</u>	<u>IAA</u>	<u>COMBINED</u>
Total	20,147	44,998	65,145	541,177	873,236	1,414,413
Foreign	5,723	23,844	29,567	164,305	439,943	604,248
% Foreign	28.4%	53.0%	45.4%	30.4%	50.4%	42.7%

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STI Policy And Planning Branch
International STI Activities

NASA/EAS Tripartite System

- o 17 Countries
- o 518 Agreements (12-31-89)
- o 4,068 Technical Reports Processed By ESA (12-31-89)

07/23/90

STI Policy And Planning Branch
International STI Activities

Tripartite Exchanges
1989

<u>COUNTRY</u>	<u>NO. OF ORGANIZATIONS</u>	<u>DOCUMENTS CONTRIBUTED</u>
Austria	7	4
Belgium	19	94
Denmark	22	7
Finland	3	44
France	129	802
Germany	44	884
Iceland	1	0
Ireland	2	2
Italy	68	344
Morocco	1	0
Netherlands	39	842
Norway	7	8
Portugal	1	0
Spain	16	10
Sweden	30	131
Switzerland	14	18
United Kingdom	<u>115</u>	<u>386</u>
Totals	518	3,576

07/23/90

6

STI Policy And Planning Branch
International STI Activities

National-Level Exchange Agreements

- o **Three (3) Concluded**
 - **Australia (1/88)**
 - **Agreement Implementation Blocked**
 - **New Discussions Initiated**
 - **Canada (5/89)**
 - **110 Participating Organizations**
 - **Israel (10/86)**
 - **6 Participating Organizations**
- o **One (1) Under Negotiation**
 - **Japan**
 - **Draft Agreement Sent (7-5-90)**

07/23/90

7

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

SCIENTIFIC AND TECHNICAL INFORMATION OFFICE

INTERNATIONAL SCIENTIFIC AND TECHNICAL INFORMATION ACTIVITIES

NASA/ISRAEL SPACE AGENCY (ISA) EXCHANGE AGREEMENT (10-14-86)

- O SINGLE, NATIONAL-LEVEL AGREEMENT WITH GOVERNMENT AGENCY
- O CURRENT BILATERALS (6) ENCOURAGED WORK THROUGH ISA
- O "BEST EFFORTS" UNDERTAKING, SUBJECT TO RESPECTIVE FUNDING PROCEDURES
- O ISA CONTRIBUTION:
 - ESTABLISH COOPERATIVE RELATIONSHIPS WITH ALL ISRAELI ORGANIZATIONS ABLE TO CONTRIBUTE IN-SCOPE MATERIAL
 - PROCESS ISRAELI MATERIAL (CATALOG, INDEX, ABSTRACT, MICROFICHE) FOR NASA STI SYSTEM
- O NASA CONTRIBUTION:
 - APPROVE ACCESS FOR ISA AND PARTICIPATING ISRAELI ORGANIZATIONS TO "AEROSPACE DATABASE" THROUGH U.S. VENDORS
 - PROVIDE ISA ONE COPY NASA UNCLASSIFIED, UNLIMITED TECHNICAL REPORTS, STAR, ETC.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

SCIENTIFIC AND TECHNICAL INFORMATION OFFICE

INTERNATIONAL SCIENTIFIC AND TECHNICAL INFORMATION ACTIVITIES

NASA/ISRAEL SPACE AGENCY (ISA) EXCHANGE AGREEMENT (10-14-86)

O BENEFITS:

-- TO NASA:

-- ISA CENTRAL COORDINATING ROLE IN ISRAEL

-- ISA ACTIVE COLLECTION EFFORTS IN ISRAEL

-- PRECEDENT FOR SIMILAR AGREEMENTS WITH AUSTRALIA,

CANADA, AND JAPAN

-- TO ISA:

-- TIMELY ONLINE ACCESS WORLD WIDE AEROSPACE LITERATURE

-- COPIES OF NASA PUBLISHED TECHNICAL REPORTS

STI Policy And Planning Branch
International STI Activities

NASA Bilateral Document Exchanges

- o 43 Countries
- o 220 Agreements
- o Up to 2,500 Technical Reports/Published Items
Accessioned Per Year (Average)

07/23/90

STI Policy And Planning Branch

INTERNATIONAL STI ACTIVITIES

BILATERAL EXCHANGES

COUNTRY	ORGANIZATIONS	COUNTRY	ORGANIZATIONS
ARGENTINA	2	NETHERLANDS	12
AUSTRALIA	7	NEW ZEALAND	4
AUSTRIA	2	NIGERIA	1
BELGIUM	3	NORWAY	3
BOLIVIA	1	PAKISTAN	1
BRAZIL	1	PAPUA-N.G.	1
BULGARIA	1	PHILLIPINES	1
CANADA	13	POLAND	1
CHILE	2	PORTUGAL	2
COLOMBIA	1	ROMANIA	1
CZECHOSLOVAKIA	2	REP. S. AFRICA	4
DENMARK	7	SPAIN	4
FINLAND	4	SWEDEN	5
FRANCE	14	SWITZERLAND	4
GREECE	2	TAIWAN	1
INDIA	10	TURKEY	1
IRELAND	1	USSR	1
ISRAEL	6	UK	3
ITALY	8	VATICAN CITY	39
JAPAN	24	WEST GERMANY	1
KENYA	2	YUGOSLAVIA	14
MEXICO	1		1
		TOTALS (43)	220

NASA Technical Memorandum 103093

NASA's Experience in the International Exchange of Scientific and Technical Information in the Aerospace Field

Philip A. Thibideau

APRIL 1990



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NASA's Experience in the International Exchange of Scientific and Technical Information in the Aerospace Field

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Washington, DC



National Aeronautics and
Space Administration
Office of Management
Scientific and Technical
Information Division

1990

NASA's Experience in the International Exchange of Scientific and Technical Information in the Aerospace Field

ABSTRACT

The early NASA international scientific and technical information (STI) exchange arrangements were usually detailed in correspondence with the librarians of the institutions involved. While this type of exchange, which involved only hardcopy (paper) products, grew to include some 220 organizations in 43 countries, NASA's main focus shifted substantially to the STI relationship with the European Space Agency (ESA) which began in 1964. The NASA/ESA Tripartite Exchange Program, which now has more than 500 participants, provides more than 4,000 highly relevant technical reports, fully processed, for the NASA-produced "Aerospace Database." In turn, NASA provides an updated copy of this Database, known in Europe as the "NASA File," for access, through ESA's Information Retrieval Service, by participating European organizations. Our experience in the evolving cooperation with ESA has established the "model" for our more recent exchange agreements with Israel, Australia, Canada, and the one under negotiation with Japan. The results of these agreements are made available to participating European organizations through the NASA File.

INTRODUCTION

I was privileged, as the NASA representative, to participate in April 1989 in the ESA-sponsored celebration of the twenty-fifth anniversary of NASA/ESA cooperation in the exchange of STI in Frascati, Italy at their ESRIN Facility. In his commemorative address, Francis Roscian, the Head of ESRIN, acknowledged, with gratitude, the role of NASA in the beginning and development of ESA's Information Retrieval Service (ESA/IRS) into "a forerunner in Europe in online information retrieval technology." He concluded that "without the initial NASA/ESA agreement and helpful attitude of NASA, this would not have been possible." (1) Similarly, Dr. Hermann Strub, Chairman of ESA's Administrative and Finance Committee, and better known here in Germany for his "air and space" role with the German Ministry for Research and Technology (BMFT), noted at the same ceremony that the "very supportive role of NASA should be mentioned, helping the emerging and small European space community in its first years to develop its own competence We have to acknowledge this unselfish attitude and thank NASA." (2)

NASA's cooperative attitude and orientation were important aspects of the U.S. space program from the beginning. Its legislative mandate, the National Aeronautics and Space Act of 1958, directed the agency, among other things, to conduct its activities "so as to contribute materially to ... cooperation by the United States with other

nations and groups of nations in work pursuant to this Act and in the peaceful application of the results thereof." (3) Further, the legislation also directed that the Administration "shall provide for the widest practicable and appropriate dissemination of information concerning its activities and the results thereof." (4) In recent Congressional testimony, Kenneth Pedersen, NASA's Associate Administrator for External Relations, noted that NASA's mandate to cooperate internationally "has been consistently reinforced by succeeding Administrations, most recently in the National Space Policy released by the White House in February, 1988. In fulfillment of this continuing mandate NASA has entered into well over 1,000 agreements with more than 135 countries and international organizations." (5)

BILATERAL STI DOCUMENT EXCHANGES

In the STI area, we began our international cooperation with organizations with similar interests, primarily governmental research institutes and laboratories, universities, and professional societies, as early as 1959. These undertakings were initiated with a simple, and informal, exchange of letters, frequently at the library level. There are now 220 of these exchanges, what we now call the Bilateral STI Document Exchanges, in 43 countries. Every year, this program is contributing up to 2,500 items to the NASA STI System.

This type of exchange can readily be illustrated by looking at the beginning of NASA's Bilateral STI Document Exchange with our conference host, the German Society for Aeronautics and Astronautics (Deutsche Gesellschaft fuer Luft- und Raumfahrt, DGLR). In his August, 1962, letter to DGLR's predecessor, the Deutsche Gesellschaft fuer Raketentechnik und Raumfahrt, DGRR, Elmo B. Parks, then Chief of NASA's Acquisitions and Dissemination Branch, informed Professor Doctor Ing. Eugen Saenger that NASA "maintains an expanding technical information exchange program to facilitate the effective interchange of ideas and information related to the aeronautical and space sciences among the world's scientific community." He also noted that NASA hoped "that research organizations and academic institutions outside of our country will utilize the scientific and technical information developed within the National Aeronautics and Space Administration. Similarly, NASA hopes to share in information developed by others in their own fields of endeavor."

In seeking to establish the exchange, Mr. Parks indicated that NASA would be pleased "to furnish your organization automatically with unclassified NASA technical publications in those areas appropriate to your field of interest." In addition, NASA would also provide its bi-weekly Technical Publications Announcements (forerunner of the current Scientific and Technical Aerospace Reports, STAR), "which abstracts and indexes NASA documents that are published, as well as other reports having significance to NASA's scientific and technical programs, and reports received under NASA's worldwide information exchange arrangements." In exchange, NASA wished to receive "such information materials as reports, monographs, journals - such as your Raketentechnik und Raumfahrtforschung Mitteilungen der DGRR, preprints, bibliographies, and other types of technical information which your organization may publish."

By 1975, NASA had refined the scope of its STI Database (currently described by NASA SP-7065, The NASA Scientific and Technical Information System ... Its Scope and

Coverage, December 1988) to the point where it was no longer accepting just any input from its exchange partners. Correspondence in this period informed the Bilateral Exchanges that "their contributions should consist of research reports, monographs, preprints, theses, dissertations, meeting papers, bibliographies, listings of research reports issued by other departments or organizations which are available to you and periodic information pertaining to your current research programs." NASA no longer wanted to receive journals, newspapers and reprints of copyrighted journal articles. This was because the published literature (including over 800 foreign journals), was being reviewed for NASA by the Technical Information Service of the American Institute of Aeronautics and Astronautics (AIAA/TIS).

NASA/ESA STI EXCHANGE AGREEMENT

In 1964, NASA's STI exchange activities took a giant leap forward with the initiation of the agreement with the European Space Research Organization (ESRO), later to become the European Space Agency (ESA). The agreement was an exchange of letters between Dr. Hugh L. Dryden, NASA's Deputy Administrator, and Prof. Pierre Auger, Director General of ESRO. ESRO agreed "to provide NASA abstracts of scientific and technical reports originating from European sources" and processed in "a form suitable for inclusion" in NASA's STAR. In turn, NASA agreed to provide ESRO with copies of STAR. Both parties agreed to exchange microforms of the documents (when ESRO developed such capability), or single copies of the documents covered by the abstracts published in STAR. In addition, ESRO was to service European requests for NASA reports announced in STAR where NASA had no bilateral relationship with the requesting organization. Further, the parties agreed in principle to "exchange material for computer searches at such time as ESRO has established facilities for processing the European input and utilizing the material concerned." (6)

The following year, 1965, the parties further refined the program to provide for the exchange of microfiche and computer search materials. Specifically, ESRO, upon completion of its systems development, agreed to "make available to NASA both magnetic and punched paper tape citations and abstracts of reports sent to NASA, with such materials in a form for immediate input to the NASA system." In turn, NASA agreed to make available to ESRO "search tapes covering materials announced in STAR and IAA, including such back files as may be available." (7)

In 1972, the parties recorded in a single agreement document their exchange requirements and practices as they had evolved to that point. A big step forward was also taken when the parties agreed that searches of the NASA-provided "machine readable" file could be made available by ESRO to "organizations or individuals who are directly engaged in aerospace activities; and organizations in member states with whom satisfactory exchange agreements were negotiated. Thus began the NASA/ESA Tripartite Exchange Program which now has more than 500 participants and provides more than 4,000 highly-relevant technical reports, fully processed, for the NASA-produced "Aerospace Database." In turn, NASA provides an updated copy of this Database, known in Europe as the "NASA File," for access, through ESA/IRS, by participating European organizations. NASA also agreed to "complete arrangements with a number of selected NASA [Bilateral] exchange partners in ESRO Member States whereby the NASA exchange partners will provide their information directly to ESRO." Presently, 30 Bilateral exchange organizations (out of a total of 117 in Western

Europe, 31 of which also have Tripartite status) in Belgium, France, Italy, The Netherlands, Sweden, and Germany are sending their input to NASA through ESA/IRS. And finally, ESRO agreed to "produce English technical translations of selected input (particularly items in French and German)." (8)

The next major step in NASA's exchange relationship with ESA (ESRO and part of ELDO became ESA in 1975) occurred in 1978 when the parties agreed on the establishment of NASA/ESA National Centers in several of the ESA member states for the purpose of identifying sources and ensuring input of aerospace documentation. To date there are ten National Centers: Belgium (CNDST); Denmark (DTB Library); Finland (Technical Research Center of Finland); Germany (Fachinformationszentrum Energie Physik Mathematik); Italy (Agenzia Spaziale Italiana); The Netherlands (COBIDOC); Norway (The Technical University Library of Norway); Spain (INTA); Sweden (Royal Institute of Technology); UK (IRS Dialtech). The Parties also agreed to change the input requirements from "best efforts" to "at least one in-scope document per each connect hour" to the NASA File.

NATIONAL-LEVEL STI EXCHANGE AGREEMENTS

In the early 1980's, I carried out an extensive evaluation of our Bilateral STI Document Exchange Program in order to assess its effectiveness as an exchange vehicle and its cost-effectiveness in terms of the amount of NASA resources expended compared with the document input received. The results were disappointing. Less than half of the Bilateral organizations carried on our records were still contributing input. I concluded that these informal arrangements had, in many cases, just fallen by the wayside, particularly as the individuals originally involved in the foreign organizations had retired or had otherwise moved on. In addition, it was proving increasingly difficult for us to monitor these exchanges on a regular basis because our resources were increasingly scarce. As a solution, I proposed that we develop a new agreement form which stipulates specific exchange requirements and an expiration date which would be signed by a governmental official in an organization that would be fully responsible for that country's STI relationship with NASA. The results are National-Level STI Exchange Agreements with Israel (Israel Space Agency, 1986); Australia (Defence Science and Technology Organisation, 1988); and Canada (Canada Institute for Scientific and Technical Information, 1989).

Under the terms of a "Technical Protocol," the parties agree that the designated foreign governmental organization is fully responsible for that country's STI relationship with NASA. Further, present Bilateral arrangements in the country would remain unchanged, as long as those organizations continued to qualify, but they would be encouraged to work with NASA through the designated governmental organization. All new requests for Bilateral STI exchanges would be referred to the governmental organization. That organization "undertakes to establish cooperative relationships with all ... organizations [in the country] which can contribute in-scope material ... to the NASA STI System, and to use its best efforts to ensure that each participating ... organization makes its maximum possible in-scope contribution." In return for these maximum in-scope contributions, these participating organizations will be approved for commercial access to the "Aerospace Database." The governmental organization recognizes that "it is NASA's overall objective to achieve a general balance between the total number of in-scope technical documents

contributed and the total amount of access granted to the "Aerospace Database."

The governmental organization is responsible for collecting the contributed technical report materials and ensuring that they are catalogued, indexed and abstracted following the NASA standards, and then submitted to NASA in hardcopy and microfiche. A collation of the bibliographic data is to be submitted in machine-readable form, along with a printed listing of the machine-readable data. The materials to be collected include "in-scope technical reports, working papers, conference papers and proceedings (with titles and abstracts translated into English where the original ... [is not in English]; pre-prints of in-scope journal articles; relevant STI announcement journals (as issued); directories of ... researchers (as published); in-scope university theses and dissertations (with titles and abstracts translated into English where the original language is ... [not English]; [and] available translations of relevant STI materials...."

In turn, in addition to providing approval for participating organizations to access the "Aerospace Database," NASA agrees to provide the following: "one copy of NASA technical reports in the NASA Distribution Divisions, including NASA Special Publications, designated by ... [the foreign governmental organization]; one hardcopy of each issue of the Scientific and Technical Aerospace Reports (STAR), and the annual STAR Index; one hardcopy of each of the Continuing Bibliographies ...; one hardcopy of each of the publications in the Historical Series; [and] one hardcopy of the annual "Journal Holdings of NASA Libraries (when available)."

NASA agrees to the designated governmental organization duplicating NASA provided STI material for distribution to participating organizations. However, "the NASA provided material so distributed may not be redistributed for third-party use, nor reproduced for sale." It is also understood that the NASA provided material is for use solely within that country. With regard to the foreign contributions, the foreign partner assumes responsibility for ensuring that any necessary copyright override permission is obtained. Then, "following its usual practice, NASA will announce publicly available, timely (up two years from date of publication), and in-scope technical report material in STAR. Such reports would, generally, be made publicly available in the United States through the U.S. National Technical Information Service (NTIS)." The foreign corporate source could also be listed as the source in the "availability statement." Unless otherwise limited, "NASA will assume that it has permission to duplicate and make microfiche copies of the material submitted ... and to make it available to all users of the U.S. NTIS." Finally, the agreement lists the program manager on each side and gives an effective period of three years, subject to extension. (9)

OBSERVATIONS

Ultimately, the success of international cooperative activities depends on the imagination, leadership, and integrity of the individuals involved. Those involved in the origins of our international STI cooperation, on both sides, deserve great credit for their bold and farsighted steps which, at the time, were steps into the unknown. At each major stage in the evolving relationships, strong and imaginative leaders, again on both sides, reached out and took the next logical step. Some have already been mentioned above. In addition, among the many others who have contributed, let me acknowledge the following: (NASA) A.A. (Des) DeSimone, former Chief of NASA's

Distribution and Exchange Branch; and Van A. Wentz, former Director of NASA's STI Division; (ESRO/ESA) John R.U. Page, former ESRO Assistant Director of Education and Scientific Information; N.E.C. Isotta, former Head of ESA/IRS; Francis Roscian, Head of ESRIN; Marino Saksida, Head of ESA/IRS; Gerd Muelhauser, Deputy Head of ESA/IRS and Head of their Systems Division; Irene Mader, Head of ESA/IRS' Aerospace Data Office; and W.A. Martin, formerly with ESA/IRS.

In the case of NASA/ESA cooperation, we began with a simple document exchange and gradually expanded the format and scope to encompass advancing information technologies and techniques. The relationships are, however, dynamic, reflecting changes in economic, political, and technological growth and development on both sides. As Dr. Strub observed, the origins of the NASA/ESA STI cooperation were "a good start to build up to today's partnership in space programmes, such as cooperation of the Space Station Freedom with the European Columbus programme, which is surely the most significant example." (10) And Francis Roscian noted the changes in the relationship when he said that "we want and expect this fruitful cooperation to continue in the future. With the difference that now the 'exchange' of information is no longer one-sided, but is starting to correspond to a fully balanced exchange agreement, where Europe brings to its partner its own know-how." (11) In fact, these changing times have brought about even closer collaboration, as noted by Marino Saksida and Irene Mader: "ESA/IRS has developed in many areas to meet specific ESA and European requirements, but its role still continues to incorporate this long-standing basic collaboration with NASA. As the European capabilities in the area of scientific and technical information have fully matured, the ESA/NASA relationship has grown even closer, to reflect the evolving interest of the parties involved and ensure that this cooperation remains effective and of mutual interest, in the service of the worldwide scientific and technical aerospace community." (12)

NASA, of course, is fully aware of the changing relationships and has sought, with considerable understanding, to sustain the cooperation. On the occasion of the ESA ceremony celebrating the 25th anniversary of our STI cooperation in April 1989 in Frascati, Italy, Van A. Wentz, then Director of NASA's STI Division, wrote to his counterpart, Francis Roscian, that "perhaps the most significant feature of our cooperation for the long haul is the in-depth dialog that has been established between NASA and ESA in information exchange. We have been able to discuss frankly numerous urgent and sensitive issues in the exchange and the diverse perceptions of our respective interests. The NASA/ESA dialog provides us with a viable and stable platform upon which we can air the issues and find those overlapping areas of common interest which will allow our cooperation to go forward." He added that NASA welcomed European "thoughts, comments, and suggestions and, within the context of inevitable budgetary and policy constraints, we will make every effort to find mutually acceptable solutions to the issues which are raised." (13)

As our respective national economies, and in the case of Western Europe, their collective economy, have matured, relationships between developed countries have come to be increasingly viewed in competitive terms. Leading-edge technologies are viewed as the key to national advantage. And STI is equated with the technologies themselves and eyed increasingly as something that must be controlled, particularly in trans-border channels. Both NASA and its STI partners have an interest in not seeing access to international STI dry up. As the BMFT's J. Czermak, Chairman of

ESA's Documentation Advisory Group, DAG, observed, "a sound policy, both in the United States and in Europe, should aim at creating interdependencies and at securing unhindered mutual access to all data bases." (14)

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8. August 16, 1972 letter from Arnold W. Frutkin, NASA Assistant Administrator for International Affairs and D.J. Harnett, NASA Assistant Administrator for Industry Affairs and Technology Utilization, to Dr. Alexander Hocker, Director General of ESRO.
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13. "Twenty-Five Years of Cooperation and Information Exchange," "25 Years of Information."
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16. Abstract The early NASA international scientific and technical information exchange arrangements were usually detailed in correspondence with the librarians of the institutions involved. While this type of exchange grew to include some 220 organizations in 43 countries, NASA's main focus shifted to the relationship with the European Space Agency, which began in 1964. The NASA/ESA Tripartite Exchange Program provides more than 4000 technical reports for the NASA-produced Aerospace Database. The experience in the evolving cooperation between NASA and ESA has established the model for more recent exchange agreements with Israel, Australia, and Canada. The results of these agreements are made available to participating European organizations through the NASA File.					
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FOREIGN ACTIVITIES

***Presented by
Joe Gignac, RMS***

FOREIGN ACQUISITIONS PROGRAM

Worldwide Scientific and Technical Aerospace
Literature is Acquired through:

- Automatic Distribution Agreements and Foreign Exchange Arrangements by NASA
- Foreign Acquisitions Program conducted by the NASA STI Facility Contractor
- Search of Reference Sources such as Abstract Journals and Bibliographies
(Examples include INIS AtomIndex, GRA&I, AGARD Reports, and ESA Reports)
- Close coordination with, and feedback from, ESA and National-level Organizations

NASA Scientific and Technical Information Facility

FOREIGN ACQUISITIONS PROGRAM

Source of Foreign Input

EXCHANGE AGREEMENTS/ORGANIZATIONS

• Tripartite	497
• National-level Organizations	3
• Bilateral	148

DIRECT INPUT

—

FOREIGN ACQUISITIONS PROGRAM

Tripartite (ESA/NASA/Foreign Organizations)

Scientific and Technical Aerospace Literature

- Acquired by ESA
- Preprocessed by ESA (NASA Format)
- Comes from Foreign Sources such as
 - Royal Aerospace Establishment (United Kingdom)
 - Technische Hogeschool (Delft, Netherlands)
 - Messerschmitt-Boelkow-Blohm (West Germany)
 - Aerospatiale (France)

NASA Scientific and Technical Information Facility

FOREIGN ACQUISITIONS PROGRAM

National-level Organizations

Acquire and Preprocess Material from Their Own Country's Organizations

- Interdisciplinary Center for Technological Analysis and Forecasting (ICTAF) in Israel
- Canada Institute for Scientific and Technical Information (CISTI)
- National Space Development Agency of Japan

NASA Scientific and Technical Information Facility

FOREIGN ACQUISITIONS PROGRAM

Preprocessing of Scientific and Technical Reports

WHO	WHEN	WHAT			
		901 Form	Magnetic Tape	Micro- fiche	Print- out
ESA	Twice per Month	✓	✓	✓	✓
CISTI	Test Batches	✓	✓	✓	✓
NASDA	Test Batches	✓	✓	✓	✓
ICTAF	Test Batches	✓	Diskette	✓	✓

NASA STI Facility Staff reviews the input, evaluates it, and provides written feedback to the originator.

NASA Scientific and Technical Information Facility

FOREIGN ACQUISITIONS PROGRAM

Bilateral

- Scientific and Technical Literature Sent Directly to NASA STI Facility
- Undergoes Full Input Processing
- Comes from Sources such as
 - TATA Institute of Fundamental Research in India
 - South African Council for Scientific and Industrial Research
 - USSR Academy of Sciences
 - Polish Academy of Sciences

NASA Scientific and Technical Information Facility

FOREIGN ACQUISITIONS PROGRAM

Direct Input (Recorded by Country Code; No DCAF)

- Acquired by the NASA STI Facility
- Processed by the NASA STI Facility
- Comes from Sources such as
 - Research Institute for Applied Mechanics (Japan)
 - Engineering Sciences Data Unit (ESDU) (England)
 - University of Rome (Italy)
 - User Request

NASA Scientific and Technical Information Facility

FOREIGN ACQUISITIONS PROGRAM

Distribution Control and Analysis File (DCAF)

- **Authority for User Services**
- **Profile of User**
- **Source of Statistics**
- **DCAF Numbers Assigned by NASA STI Facility, ESA, ISA, CISTL, and NASDA**
- **Used by NASA in Evaluating Foreign Exchange**

FOREIGN ACTIVITIES (cont'd)

***Presented by
Jean Tolzman, RMS***

FOREIGN ACQUISITIONS PROGRAM

Potentials for Enhancement

Increased
Foreign Acquisitions

- Expand Scope and Coverage
- Measure Supplier Performance Level
- Exploit "Gray Market" Sources
- Provide Multiple Acquisitions Routes
- Streamline Acquisitions Process
- Modify Database Record Input Process
- Engage Users as Trading Partners
- Reward Trading Partners for Timely Input
- Expand Acquisitions for Alternate Media Formats
- Expand Identification/Location Resources and Procedures
- Build Working Relationships with New/Existing Trading Partners

Current
Foreign Acquisitions

NASA Scientific and Technical Information Facility

FOREIGN ACQUISITIONS PROGRAM

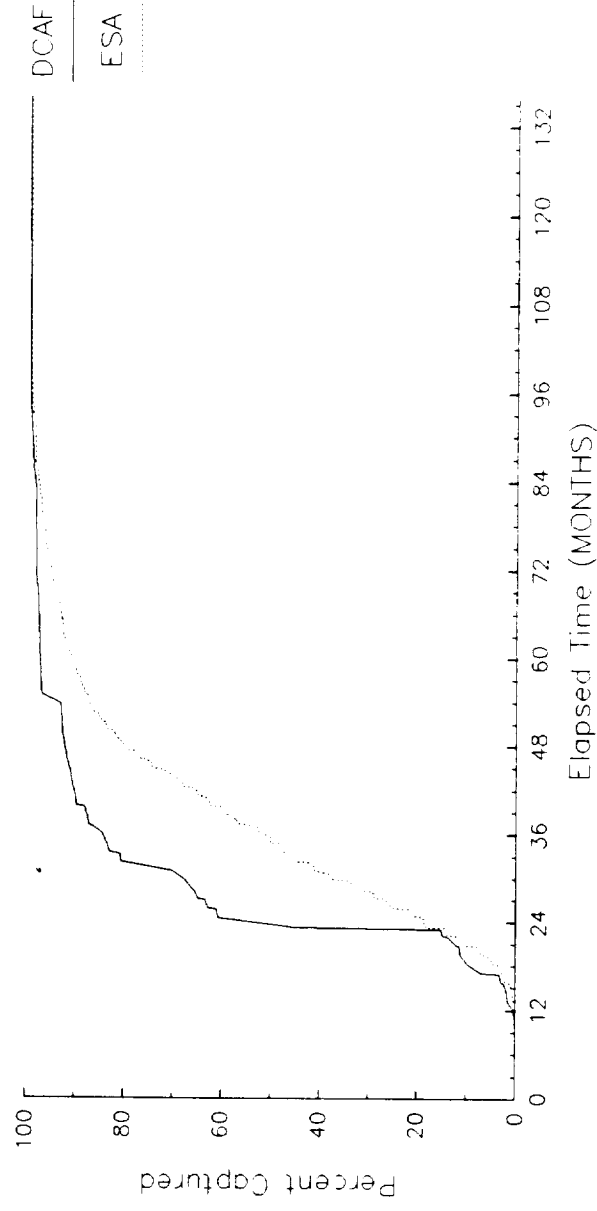
Increasing Volume and Timeliness

- Review and Modify Database Scope and Coverage
- Actively Identify More Literature through Increasing Review of Reference Resources
- Study and Exploit the "Gray Market" for Research Literature
- Obtain Identified Literature Directly from Source If More Timely or Only Available Source
- Measure Performance of Exchange Partners or Suppliers
- Expand the Base of Trading Partners
- Modify Database Record Input Process
 - Increase electronic file transfer
 - Use hand-held scanners
 - Update record-transfer format
- Review Entire Acquisitions Process and Workflow to Delete Outdated Requirements and Streamline Process and Workflows
- Encourage Users to Identify Literature
 - Provide online mechanism to alert NASA STI program about additional reports and literature
 - Exchange services for information about additional reports and literature

NASA Scientific and Technical Information Facility

FOREIGN ACQUISITIONS PROGRAM

ESA and DCAF Star Accessions
Volumes and Elapsed Time Between Release Dates
and Star Publication



NASA Scientific and Technical Information Facility

FOREIGN ACQUISITIONS PROGRAM

Potential Impacts of Expanding the
Volume of Foreign Acquisitions

- Equipment Requirements
- Labor Requirements
- Copyright Restrictions
- Translation Requirements

NASA Scientific and Technical Information Facility

FOREIGN ACTIVITIES - AIAA

***Presented by
Barbara Lawrence, AIAA***

Part I - INTERNATIONAL OUTLOOK

The Need For An International Outlook

Five Trends

- Worldwide Dissemination of Expanding Scientific Knowledge

- Growth In the Number of Global Competitors

- Fragmented Markets and Shifting Customer Preferences

- Production Technologies That Allow Greater Flexibility and Responsiveness

- A Proliferation In The Number of Technologies Relevant To Any Given Product

Kim B. Clark
Harvard Business School

AIAA TIS

MORE HEADLINES

**BUSINESS TAPS EAST BLOC'S
INTELLECTUAL RESERVES**

**EUROPE'S SCIENTIFIC
RESEARCH IS SEEN GAINING
INFLUENCE**

Some Recent Headlines

Japanese Space Stake

WSJ 6/6/90

Taiwan, Long Noted For Cheap
imitations, Becomes An Innovator

WSJ 6/1/90

Soviets, United Technologies' Pratt Link
Could Lead To Joint Plane-Engine Output

WSJ 5/18/90

From Luftwaffe, A New Idea For Steel

NYT 8/30/89

AEROSPACE LITERATURE DISTRIBUTION

VS

UTILIZATION

	(%)	U.S	EUROPE	USSR	OTHER
<u>LITERATURE DISTRIBUTION</u>		50	24	12	14

LITERATURE USE -
% CITATIONS

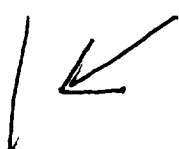
AIAA J	85	11	1	3
7FW	41	52	1	6
RECHERCHE AEROSPATIALE	41	44	1	14

**NASA /DOD KNOWLEDGE DIFFUSION
PROJECT**

**EXTERNAL INFORMATION SOURCES AND
AEROSPACE R&D**

FINDINGS:

**ACCESSIBILITY IMPORTANT;
BUT CONNECTED TO QUALITY
OF THE INFORMATION**



**INFORMATION EXTERNAL TO
ORGANIZATION USED LESS
THAN INTERNAL INFORMATION**

AIAA INTERNATIONAL OUTLOOK

AIAA STRATEGIC PLAN:

Improve utilization of aerospace STI with special emphasis on use of international aerospace literature

TIS MISSION:

Provide quality aerospace information products and services to the international aerospace communities by collecting, processing, storing, and disseminating worldwide aerospace STI

AIAA TIS ACQUISITIONS APPROACH

EMPHASIZES:

Quality Selection

Unique Materials

AIAA Position

Worldwide Network

METHODOLOGY:

Literature Surveillance

Worldwide Network

AIAA Position

Sources

AIAA TIS ACQUISITIONS APPROACH

LITERATURE SURVEILLANCE

PUBLICATIONS CATALOGS

ADS

JOURNAL CITATIONS

UNPUBLISHED LISTS

Circulated among librarians

IRREGULAR EVENTS

Summer courses

NASA SUPPLIED MANUSCRIPTS

PROFESSIONAL LIBRARY CONTACTS

AUTHORS

AIAA TIS ACQUISITIONS APPROACH

WORLDWIDE NETWORK

LONG ESTABLISHED

PERSONAL CONTACTS

AIAA HQ STAFF PARTICIPATE

> 100 COUNTRIES

INTERNATIONAL ORGANIZATIONS

AIAA TIS ACQUISITIONS APPROACH

AIAA POSITION AN ASSET

AIAA PUBLICATIONS

~ 8% of all aerospace literature

EXCHANGES

~ AIAA journals for sister society publications

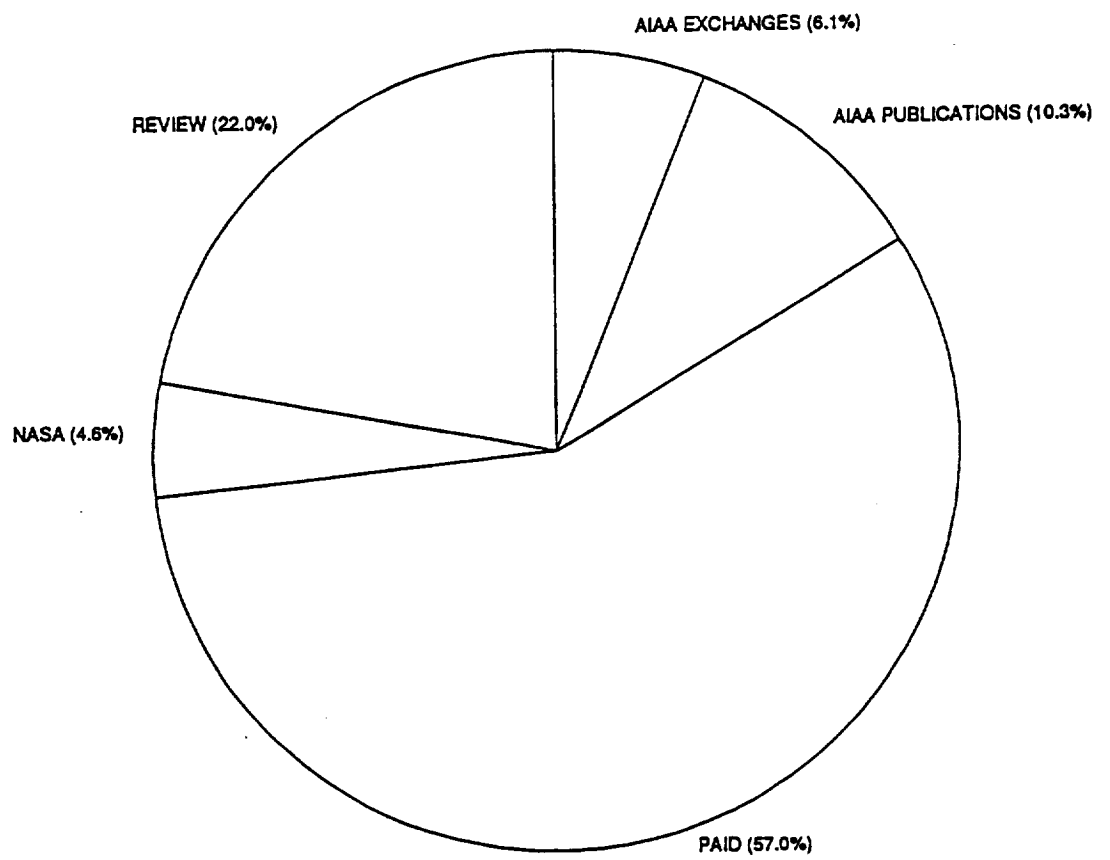
REVIEW COPIES

~ AIAA/IAA reputation as quality aerospace publisher and announcement & retrieval mechanism

MEMBERS AS AUTHORS

TECHNICAL AWARENESS PROJECT

TIS – Technical Committee liaison



AIAA TIS ACQUISITIONS APPROACH

SOURCES DIVERSE

PROVIDERS:

Commercial Publishers
Learned Societies
Research Institutions
International Organizations
Authors
Universities

DOCUMENT TYPES:

Journal
Serials
Monographs
Collected Work
Conference Volumes
Meeting Papers

AIAA TIS ACQUISITIONS APPROACH

SOURCES DIVERSE

TOOLS:

Exchange

Review

Purchase

COST MEASUREMENT

AIAA position

NFAIS brochure

Persuasive staff

Monitor serial productivity

Control shipping cost

The Technical Skills of AIAA TIS Staff Fit the Multidisciplinary Sources of Aerospace Literature

Department	Technical Skills
Document Analysis	Aeronautical Engineering Applied Mechanics,, Applied Mathematics Astronomy, Astrophysics Bioscience, Chemical Engineering Computer Science, Communications Control Theory, Lasers Life Sciences, Materials Science Mathematics, Mechanical Engineering Solid State Physics
Abstracting	Aerospace Systems, Aircraft Design Biochemistry, Biology Chemistry, Ecology Electronics, Energy Technology Environment, Materials Science Metallurgy, Microbiology
Indexing	Chemistry, Computerized Control Computer Science, Economics Electronics, Fluid Mechanics Industrial Engineering, Mathematics Mechanics, Metallurgy Microprocessors, Nuclear Engineering Operations Research

Foreign Language Skills of AIAA TIS Staff Fit the Publication Sources of Aerospace Literature

AIAA TIS Foreign Language Skills	Aerospace Literature Countries of Publication
*Bulgarian	Bulgaria
*Chinese	P.R.C., Nationalist China, Singapore, Hong Kong
*Czech	Czechoslovakia
*Dutch	Netherlands
Filipino	Philippines
Finnish	Finland
*French	Belgium, Canada, France, Switzerland, Turkey
*German	Austria, Denmark, Federal Republic of Germany, German Democratic Republic, Switzerland
Hebrew	Israel
Hungarian	Hungary
*Italian	Italy
*Japanese	Japan
*Korean	Korea
*Polish	Poland
Portuguese	Portugal, Brazil
*Romanian	Romania
*Russian	U.S.S.R., Larvia, Estonia, Lithuania
*Serbo-Croatian	Yugoslavia
*Slovak	Czechoslovakia
*Spanish	Spain, Argentina, Mexico, Chile
Swedish	Sweden
*Ukrainian	U.S.S.R.
English	U.S., Australia, Canada, U.K., Norway, India, South Africa, Saudi Arabia, Republic of Ireland

*Indicates Languages Required By NASA

AIAA TIS

ACQUISITION INITIATIVES

Technical Awareness Program

Review all "comps" from AIAA Technical Publications Dept for exchange potential

Use AGARD LS and consulting visit to begin exploration of computer assisted translation

Explore relationships with AIAA International Corporate Members

Ask NASA - will scientific attachees be helpful?

TECHNICAL AWARENESS PROJECT
(TAP)
FOR
TC - TIS LIAISON

OBJECTIVES:

Verify our understanding of the literature

Obtain feedback on sources

Establish relationship with TCs

TODAY'S REQUEST:

Identify liaison from TC to TIS

NEXT:

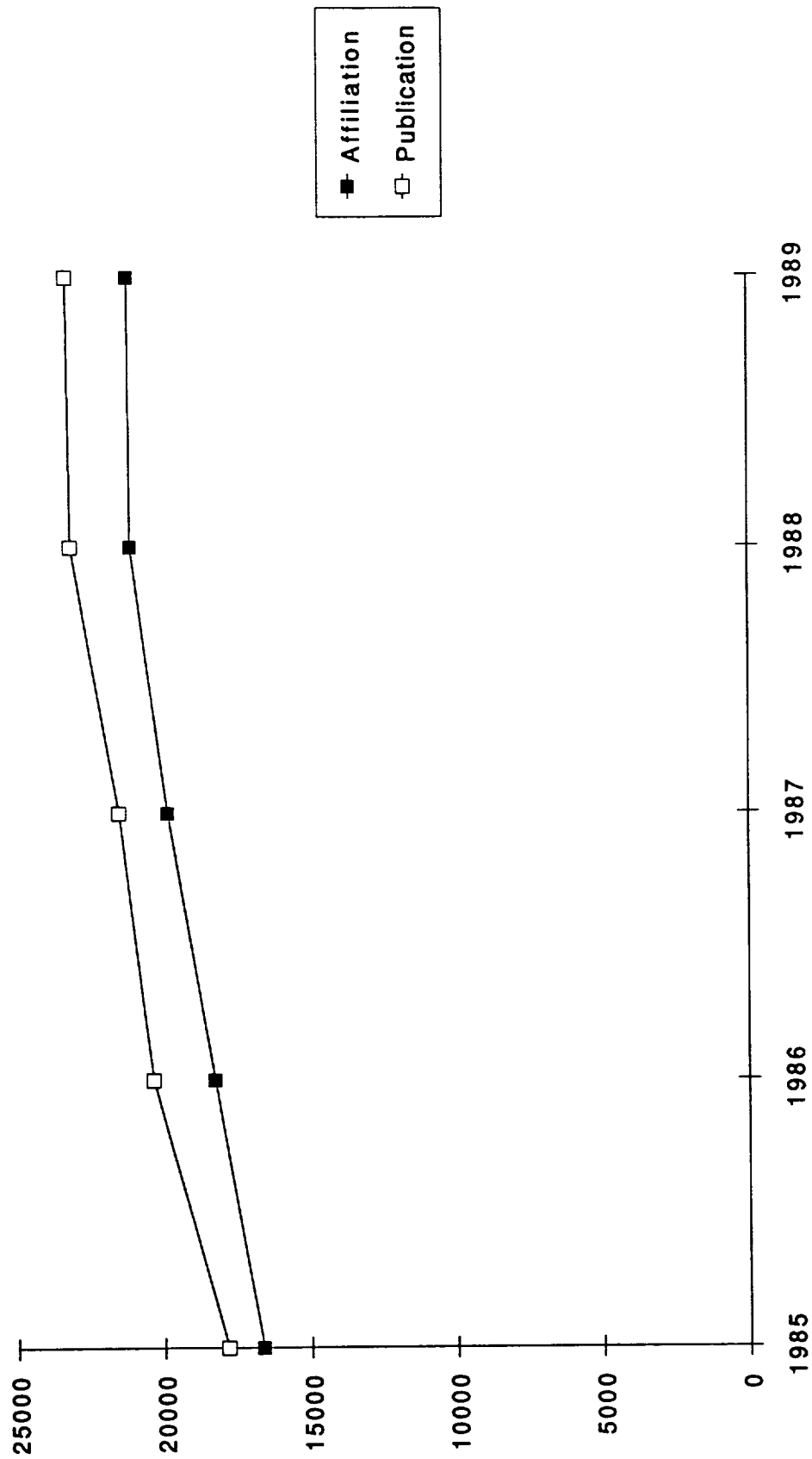
TIS provide bibliometric analysis

TC review journal list

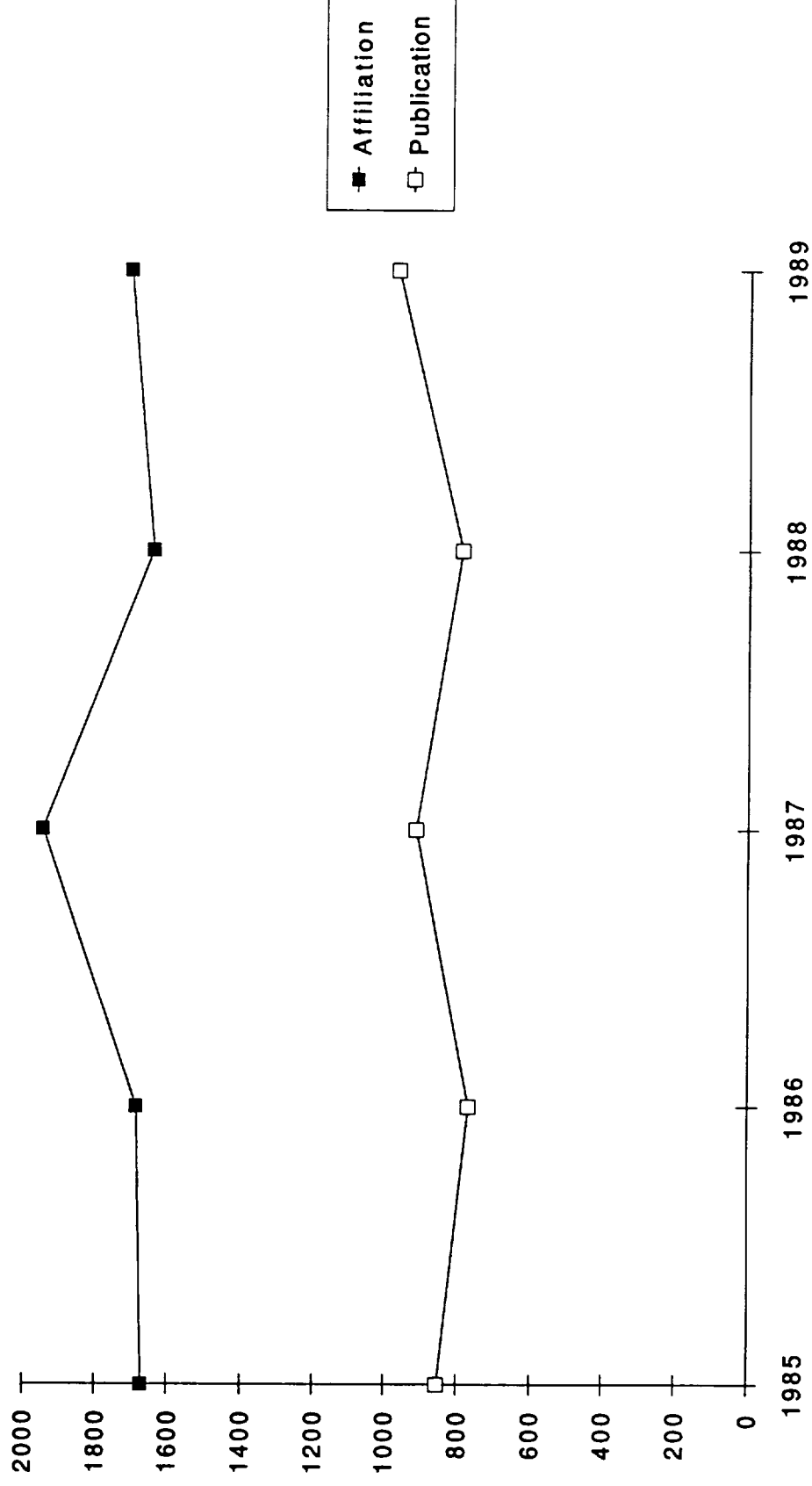
Atmospheric Environment
Aircraft Design
Space Processing

Some examples
of country
Publication behavior

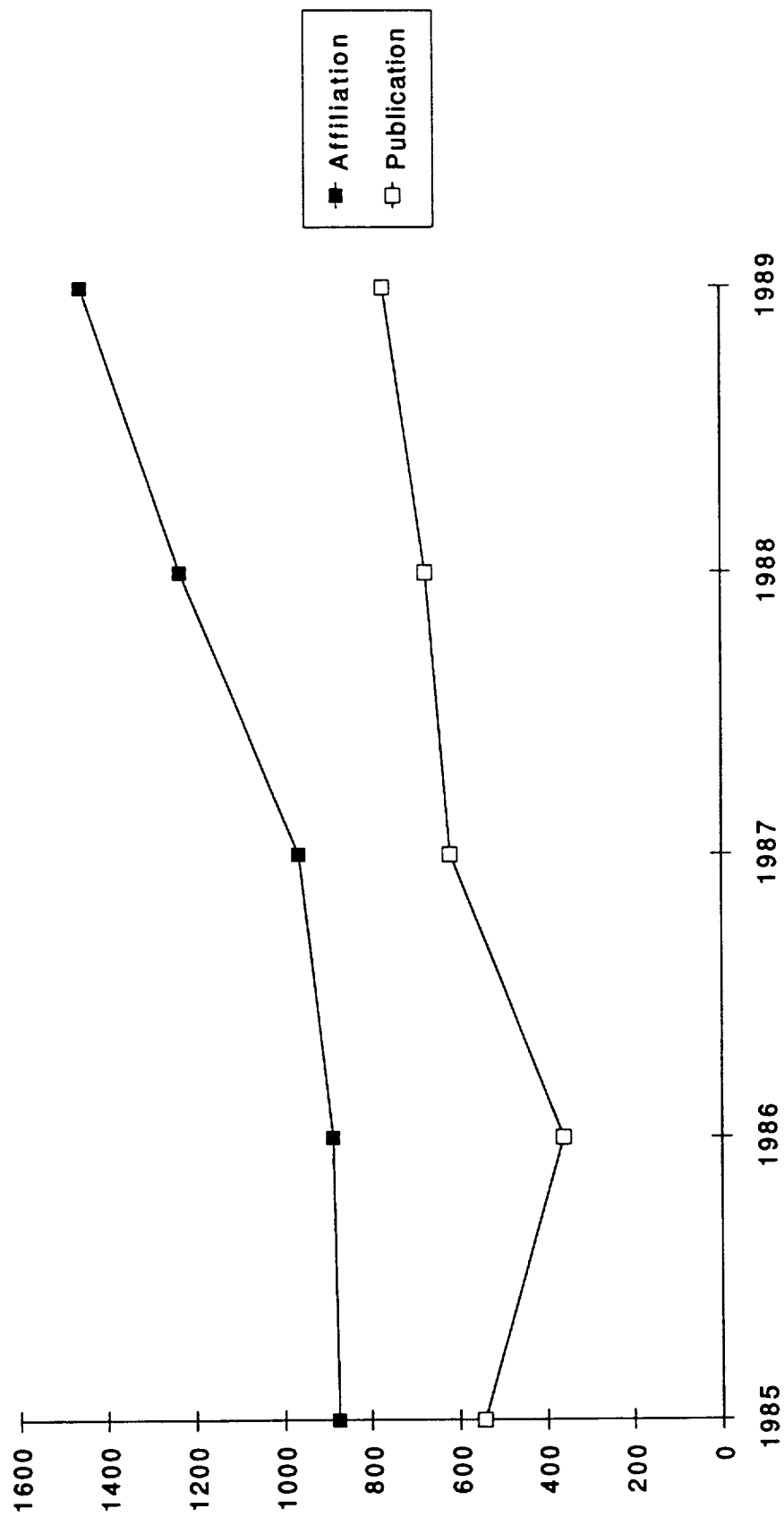
United States



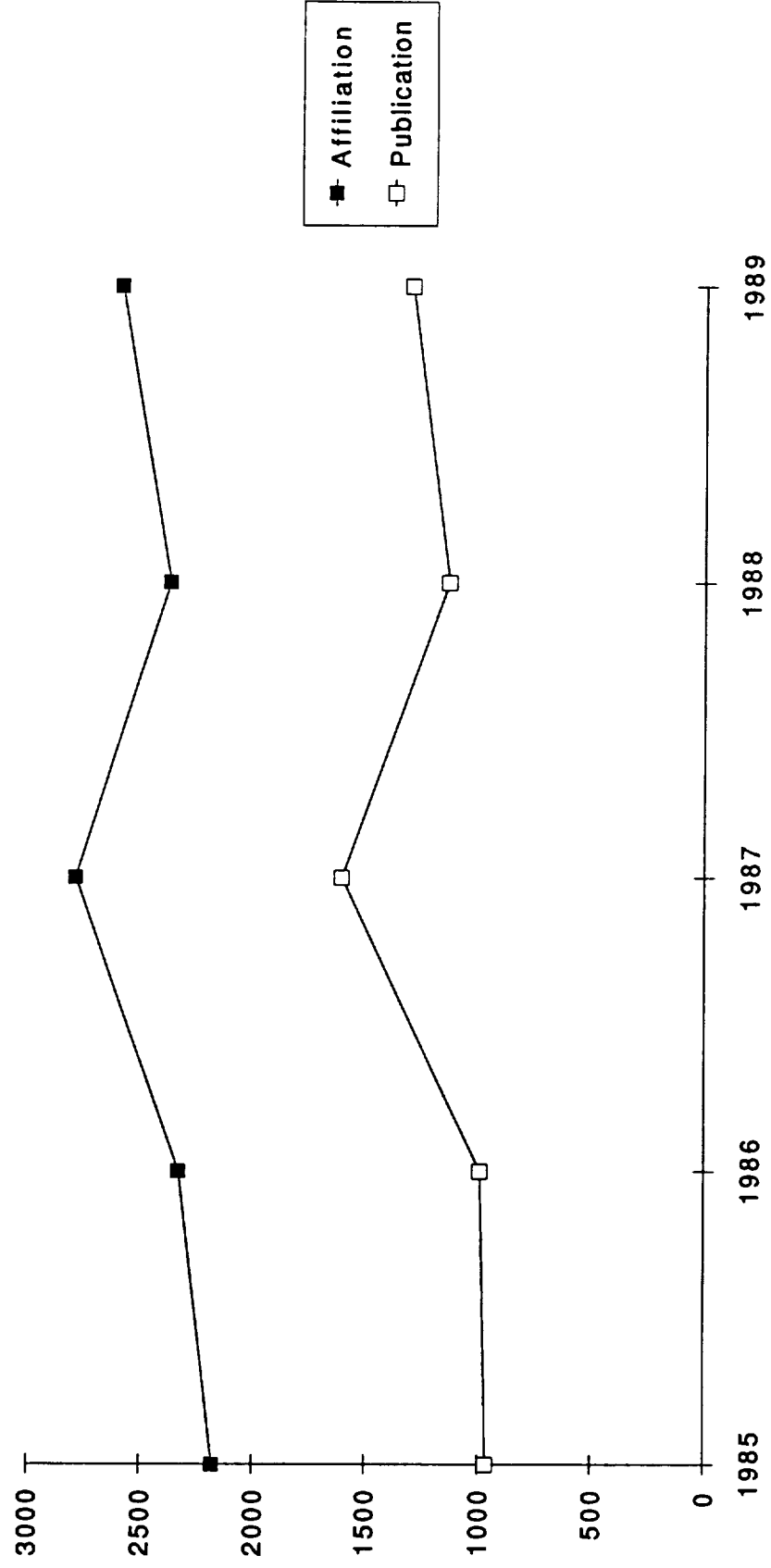
France



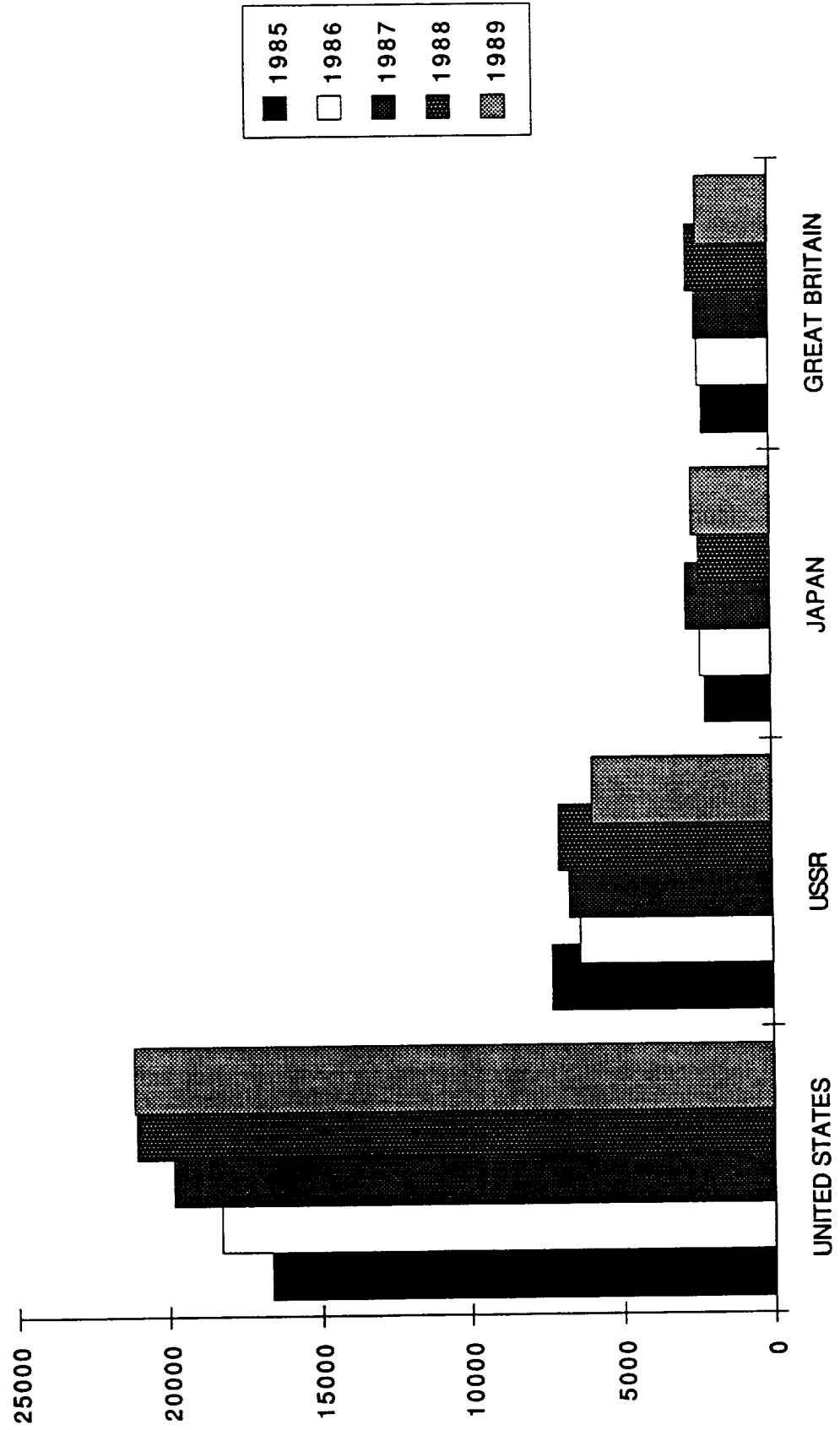
China - PRC



Japan



Major Producers 1



Major Producers 2

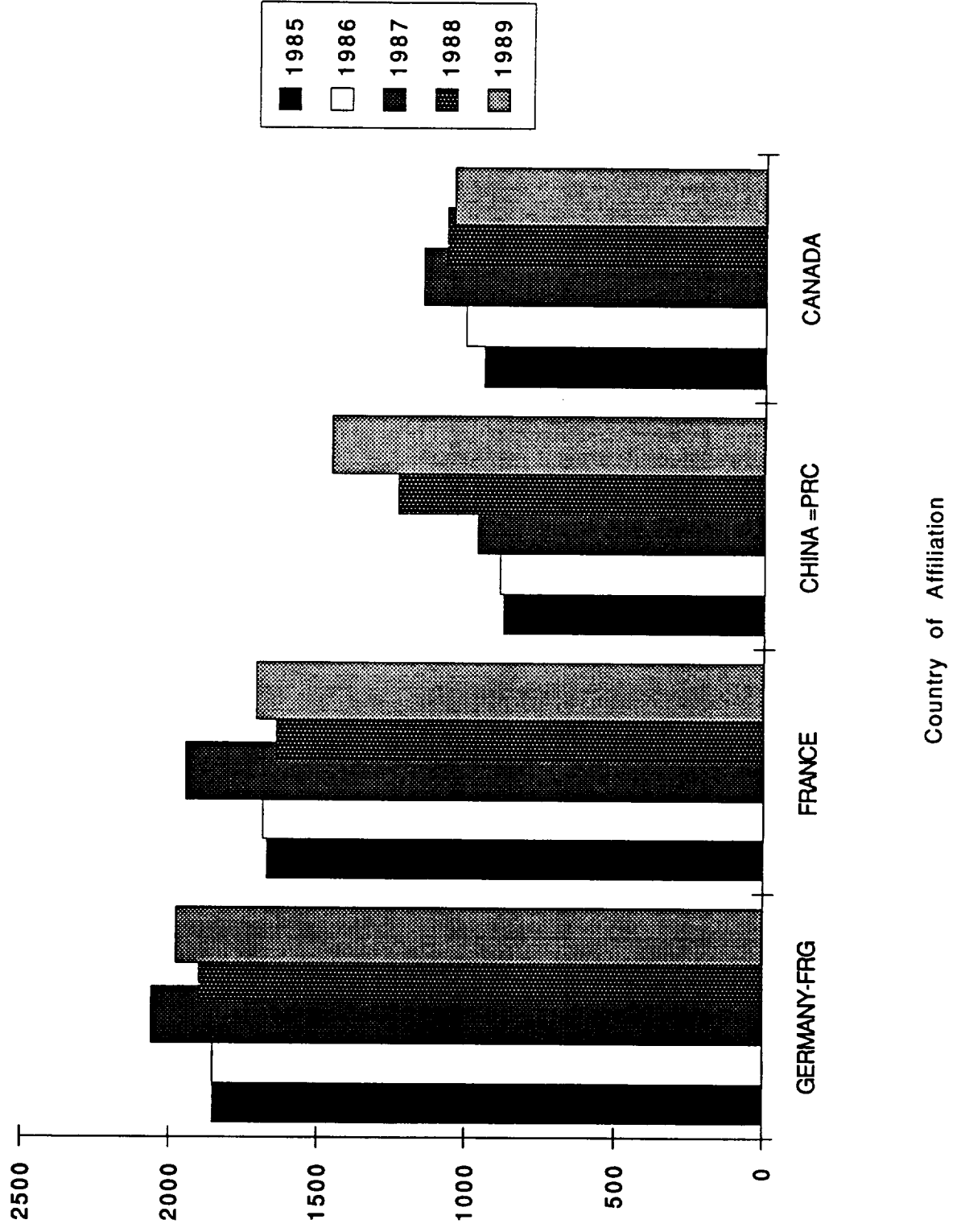
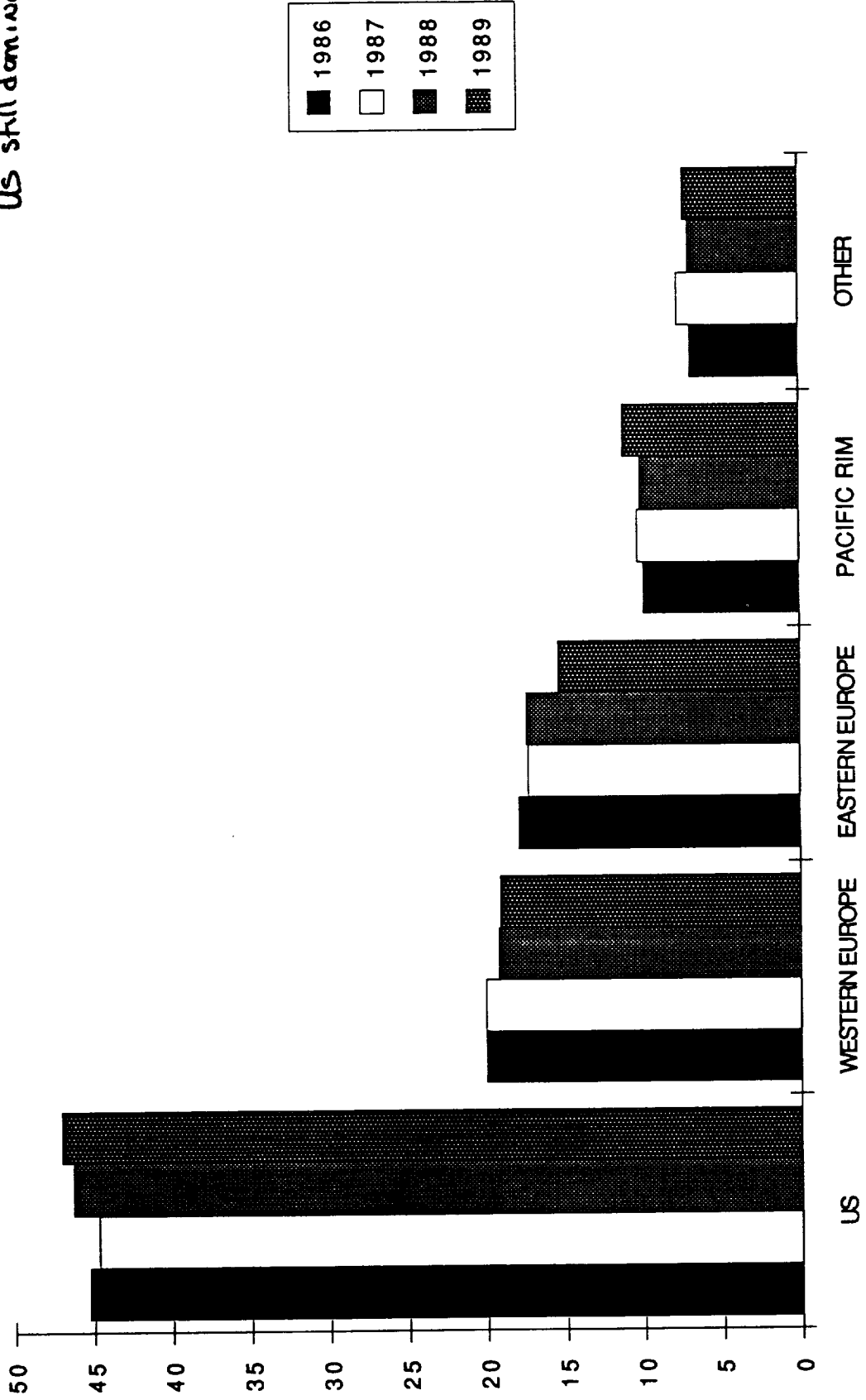


Chart3

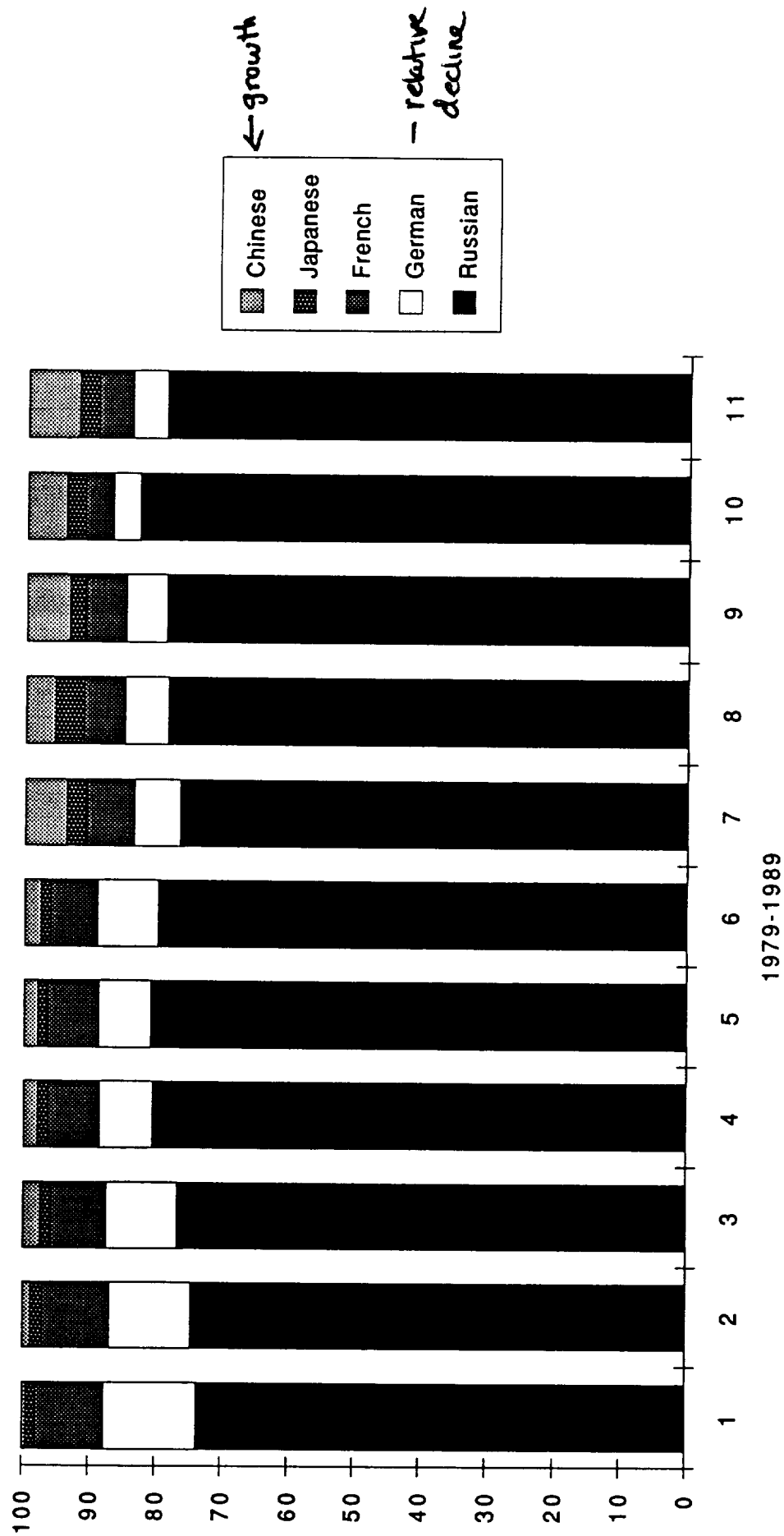
REGION OF
AFFILIATION
%

US skill dominates



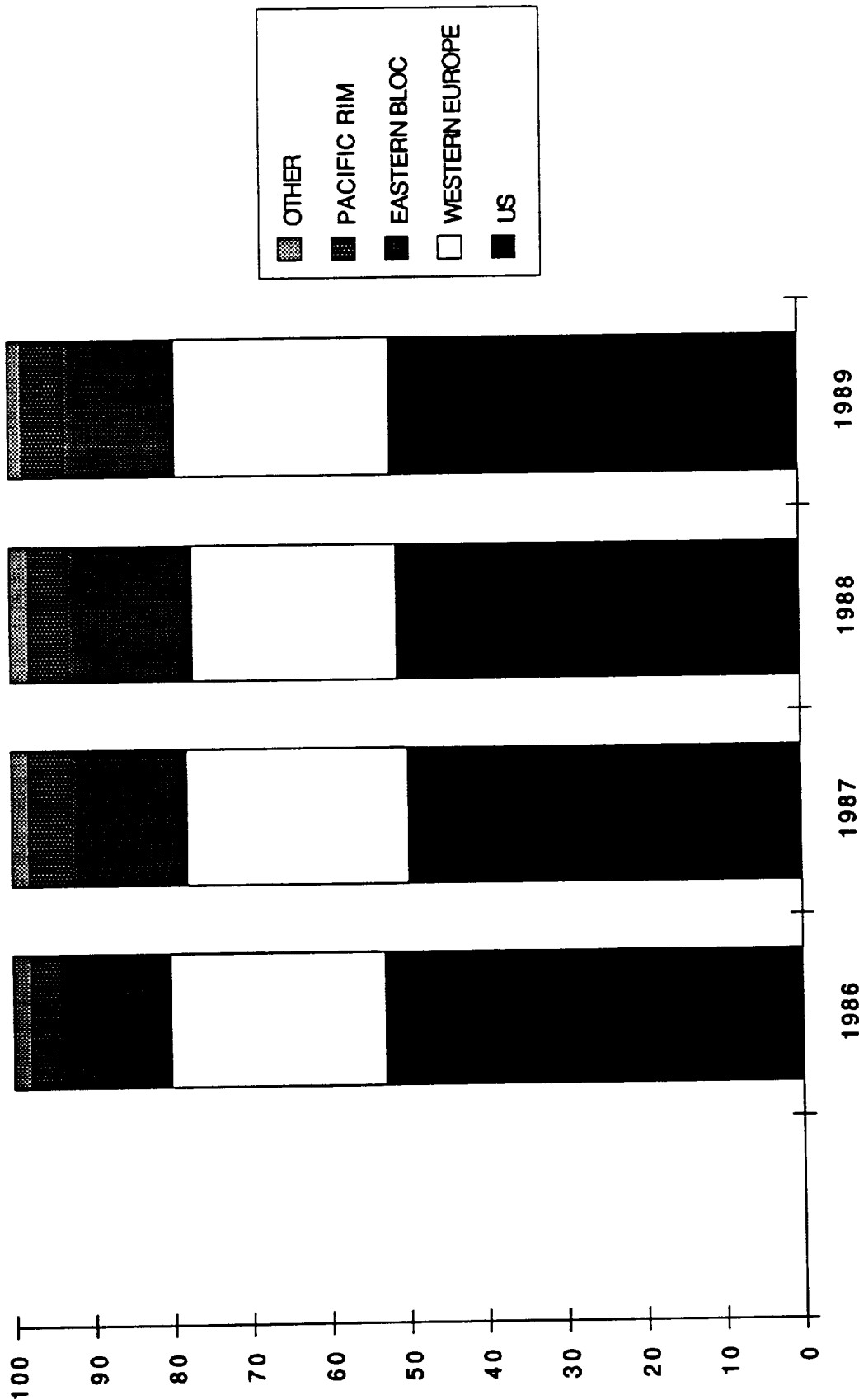
MAJOR LANG TRND

MAJOR LANGUAGES-TRENDS



COUNTRY OR ASSOCIATION
BY REGION
70

Chart2



INTERNATIONAL THEMES

COMPETITIVENESS AND COOPERATION

REGIONAL TRENDS

EUROPE

- Consolidation

- Cooperation

SOUTH AMERICA

- Space consortium

- Professional society role in STI dissemination

EASTERN EUROPE

- Open to commercial opportunities

PACIFIC RIM

- Building, Manufacturing *and* Technology

UNITED STATES

- Independent approach

- Manufacturing Shift away leads to technology erosion

- No national policy/driver

NASA TRANSLATION PROGRAM

***Presented by
Katie Bajis, RMS***

TRANSLATION SERVICES SUPPORT PROJECT

TRANSLATION PROCESS

- CENTER LIBRARIAN OR INDIVIDUAL SENDS DOCUMENT TO NTT
- DUPLICATION CHECK IS PERFORMED TO DETERMINE IF A TRANSLATION IS AVAILABLE
- WORD COUNT AND DOLLAR COST ARE DETERMINED AND DOCUMENT IS SENT TO THE TRANSLATION CONTRACTOR
- GENERAL FORMAT AND QUALITY OF THE FINISHED TRANSLATION ARE EVALUATED
- TRANSLATION IS SENT TO THE REQUESTER AND STIF

VOLUMES IN FY 1989

- 251 TECHNICAL TRANSLATIONS INITIATED
- 3 MILLION WORDS TRANSLATED
- MOST FREQUENT LANGUAGES - RUSSIAN, GERMAN, JAPANESE, CHINESE, FRENCH

TRANSLATION CONTRACT

CURRENT CONTRACT

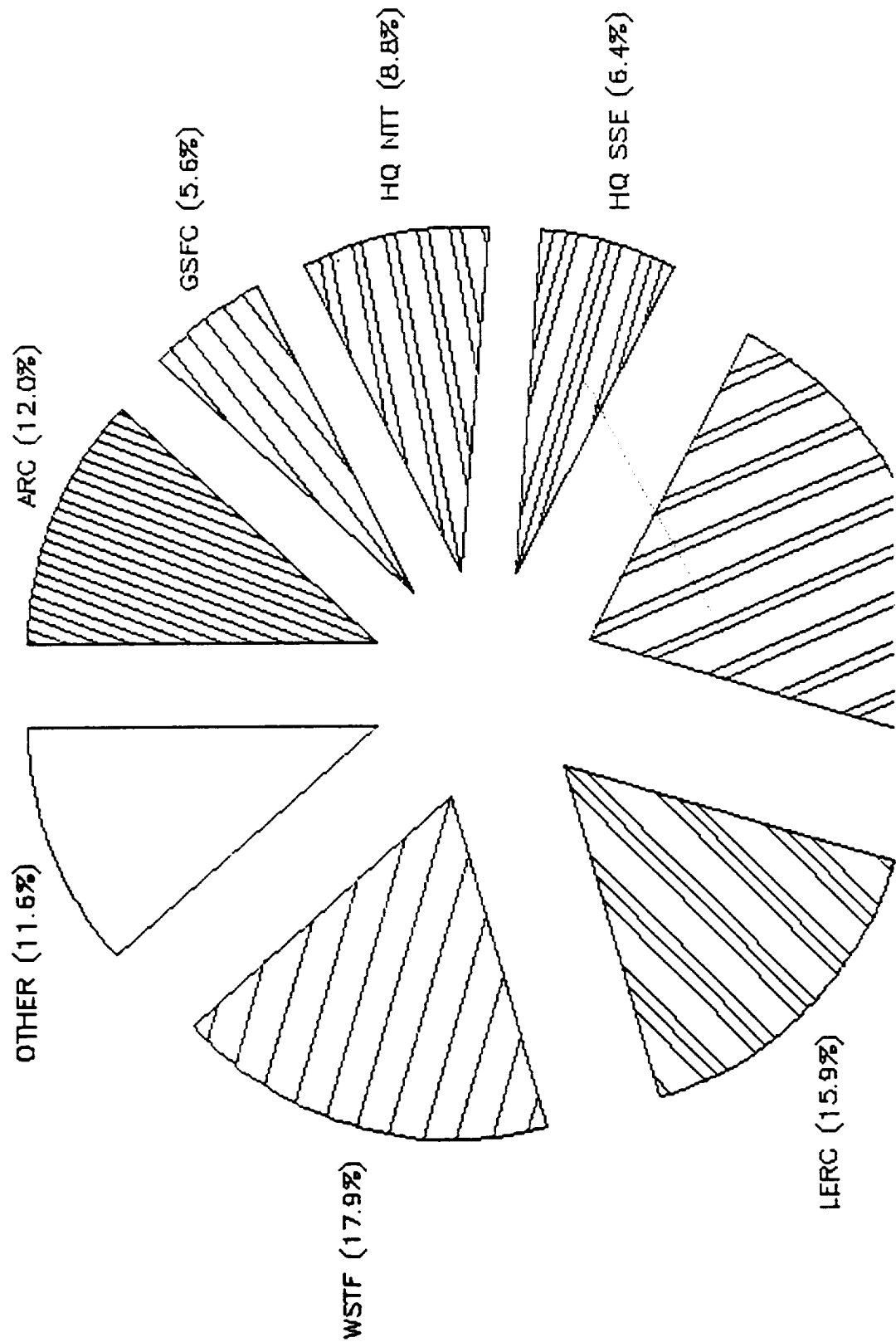
- NTT FUNDS AND PROCESSES TRANSLATIONS FOR HQ AND ALL CENTERS
- GSFC, LERC, AND JPL ALSO ISSUE PURCHASE REQUESTS AND FUND THEIR OWN TRANSLATIONS

NEXT CONTRACT

- ONLY NTT WILL BE ABLE TO ISSUE PURCHASE REQUESTS
- ALL CENTERS WILL BE REQUIRED TO REIMBURSE NTT FOR THE TRANSLATION COSTS
- SOME TRANSLATIONS AND ALL MONTHLY REPORTS WILL BE SUBMITTED BY ELECTRONIC MAIL IN ADDITION TO THE USUAL HARD COPIES

FY 1989 TECHNICAL TRANSLATIONS

TOTAL TRANSLATIONS: 251



22

FY 1989 LANGUAGE WORD COUNT

TOTAL WORDS: 3,172,072
OTHER (3.1%)
CHINESE (2.8%)

FRENCH (6.9%)

GERMAN (19.5%)

JAPANESE (6.1%)

RUSSIAN (61.6%)

